

Panasonic®

CD Stereo System

CD 立體聲組合音響

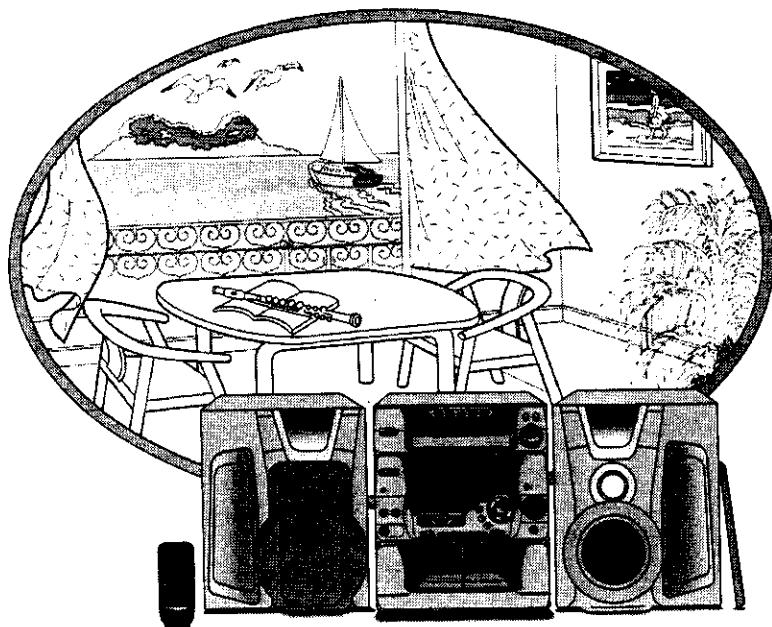
نظام قرص كومباكت إستريو

SC-AK50

Operating Instructions

使用説明書

ارشادات التشغيل



COMPACT
disc
DIGITAL AUDIO

Before connecting, operating or adjusting this product, please read these instructions completely. Please save this manual.

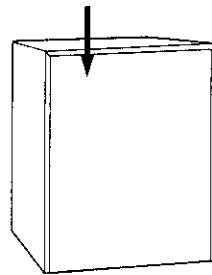
连接、操作或調節本產品前，請仔細閱讀下列說明。
並請保管好該手冊。

يرجى قراءة هذه الإرشادات كلها قبل توصيل أو تشغيل
أو ضبط هذا الجهاز.
يرجى الاحتفاظ بكتاب التشغيل هذا.

GC GH GT

RQT3936-G

CLASS 1 LASER PRODUCT



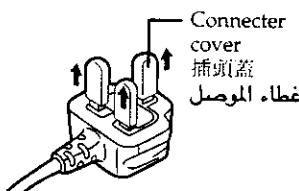
(Back of product)
(产品背面)
(خلف المنتج)

DANGER	INVISIBLE LASER RADIATION WHEN OPEN AVOID DIRECT EXPOSURE TO BEAM
ADVARSEL	USYNLIG LASERSTRALING VED ÅBNING. NAR SIKERHEDSABRYDRE ER UDE AF Funktion. UNDGA UDSETTELSE FOR STRALEN
VARO!	AVATTAMASSA JA SUOJALUKITUS OLMETE. AESSÄ OLEJ ALITUNA NAKYMÄTÖNÄ LASERSATELYLLE. ALAKÄSÖ SÄTEISEEN
WARNING	OSYNLIG LASERSTRÄLLNING NAR DENNA DEL AV OPPNA OCH SPÄRREN UPPKOPPLAD. BETRÄKTA LASERSTRÄLLEN
ADVARSEL	USYNLIG LASERSTRALING NAR DEKSEL ÅPNES OG SIKERHEDSLAS BRYTES. UNNGÅ UDSETTELSE FOR STRALEN
VORSICHT	UNSICHTBARE LASERSTRÄHLUNG WENN DENNA DEL AR OPPNA OCH NIET DEM STRAHL AUSSETZEN

(Inside of product)
(Indersiden at apparatet)
(Tuotteen sisällä)
(Apparatens insida)
(Produktets innside)
(Im inneren des Gerätes)

Note on AC power supply cord (For Hong Kong)
有关交流电源線的注意事項 (用於香港時)
ملاحظة بخصوص كابل تجهيز التيار المتردد (المونك كونك)

Before use
使用之前 / قبل الاستخدام
Remove the connector cover as follows.
如下圖所示，拆下插頭蓋。
رفع غطاء الموصى كما يلى.



How to replace the fuse
安装保險絲的方法 / كيفية إستبدال الصهيره
1. Remove the fuse cover with a screw driver.
1. 使用螺絲刀打開保險絲盒蓋。
1. إزْلَعْ غَطَاءَ الصَّهِيرَةَ بِمَفْكَكٍ.

2. Replace the fuse and attach the fuse cover.
2. 更換保險絲，然後安裝保險絲。
2. إِسْتَبْدَلْ الصَّهِيرَةَ وَثَبَّتْ غَطَانِهَا.

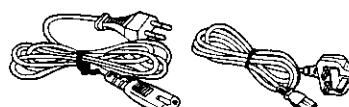


Supplied accessories
提供附件
المحتقات المرفقة



Please check and identify the supplied accessories.
請檢查和確認提供的附件。
يرجى التحقق وتمييز
المحتقات المرفقة.

AC power supply cord 1 pc.
AC 电源線 1 件
کابل تجهيز التيار المتردد 1 قطعة
واحدة
(For others) (For Hong Kong)
(用於其它地區時) (用於香港時)
(المناطق الأخرى) (المونك كونك)



Dear customer

Thank you for purchasing this system.
For optimum performance and safety, please read these instructions carefully.

These operating instructions are applicable to the following system.

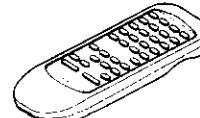
System	SC-AK50
Main unit	SA-AK50
Speakers	SB-AK90

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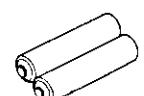
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Remote control transmitter 1 pc.
遙控器 1 件
مرسلة مسيطر التحكم عن بعد 1 قطعة
واحدة

(EUR644379)



Remote control batteries 2 pcs.
遙控器電池 2 顆
بطاريات مسيطر التحكم عن
بعد 2 قطعات
(R6/LR6, AA, UM-3)



Suggestions for safety

安全建議

Placement

Avoid placing the unit in areas of :

- direct sunlight
- high temperature
- high humidity
- excessive vibration
- uneven surfaces (Place the unit on a flat level surface.)

Such conditions might damage the cabinet and/or other component parts and thereby shorten the unit's service life.

To protect the unit against sound distortion and acoustical effects, please place the unit at least 15 cm away from wall surfaces etc.

Stacking

Never place heavy items on top of the unit or the power cord.

Voltage

- It is very dangerous to use an AC power source of high voltage such as for an air conditioner.

A fire might be caused by such a connection.

- A DC power source can not be used. Be sure to check the power source carefully, especially if on a ship or other place where DC is used.

Power cord protection

- Avoid cuts, scratches or poor connection of the AC main cord, as this may result in fire or electric shock.

Excessive bending, pulling or slicing of the cord should also be avoided.

- Do not pull on the cord when you are disconnecting the power, as this could cause an electric shock. Grasp the plug firmly when you disconnect the power supply.

- Never touch the plug with wet hands or a serious electric shock could result.

Foreign materials

- Ensure that no foreign objects, such as needles, coins, screwdrivers etc., accidentally fall into the unit or through the ventilation holes.

Otherwise, a serious electric shock or malfunction could occur.

- Be extremely careful about spilling water or liquid on/into the unit, as a fire or electric shock could occur.

(Disconnect the power plug and contact your dealer immediately if this occurs.)

- Avoid spraying insecticides onto the unit as they contain flammable gases which can be ignited.

- Insecticides, alcohol, paint thinner and similar chemicals should never be used to clean the unit as they can cause flaking or cloudiness to the cabinet finish.

Service

- Never attempt to repair, disassemble or reconstruct the unit if there seems to be a problem.

A serious electric shock could result if you ignore this precautionary measure.

- If a problem occurs during operation (the sound is interrupted, indicators fail to light up, smoke is detected, etc.) contact your dealer or Authorized Service Center immediately.

- Disconnect the power supply if the unit will not be used for a long time. Otherwise the operation life could be shortened.

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

CAUTION!

DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT IN CABINET OR IN ANOTHER CONFINED SPACE IN ORDER TO KEEP WELL VENTILATED CONDITION. ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION CONDITION TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING.

CAUTION:

The AC voltage is different according to the area.

Be sure to set the proper voltage in your area before use.
(For details, please refer to the page 8.)

放置

避免將本機放置在下列場所：

- 直射陽光
- 高溫
- 高濕
- 過度振動
- 不平表面（請將本機放置在平坦的平面。）

這些條件會損壞機殼和／或機件，並且會縮短本機的使用壽命。

為了使本機免受聲音失真和共振的影響，放置本機時，請至少離開牆面等 15cm 以上。

疊放

勿在本機頂部或電源線上放置重物。

電壓

- 使用如空調機等所用的高壓 AC 電源，是非常危險的。

進行這樣的連接，可能會引起火災。

- 不能使用 DC 電源。

必須仔細檢查電源，尤其是在船舶或其上使用 DC 電源之處。

電源線保護

- 避免切割、刺傷或不良連接 AC 電源線。也應避免過分用力彎曲、拉扯或割切電線。

- 切斷電源時，勿拉扯電線，否則會引起觸電。

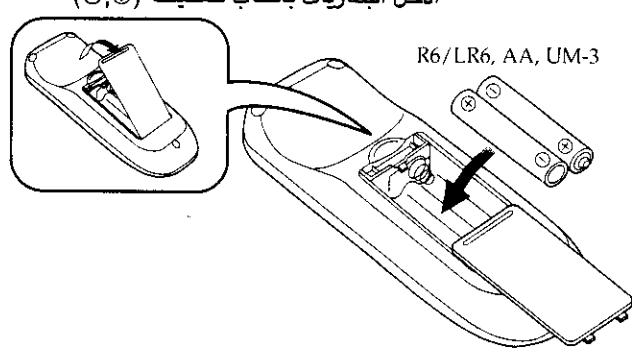
拔出電源線時要緊緊地握住插頭。

- 千萬勿使用濕手觸摸插頭，否則會導致嚴重的觸電。

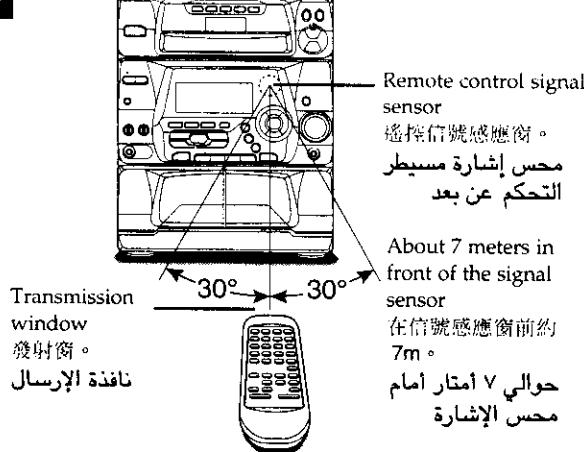
Concerning the remote control

A

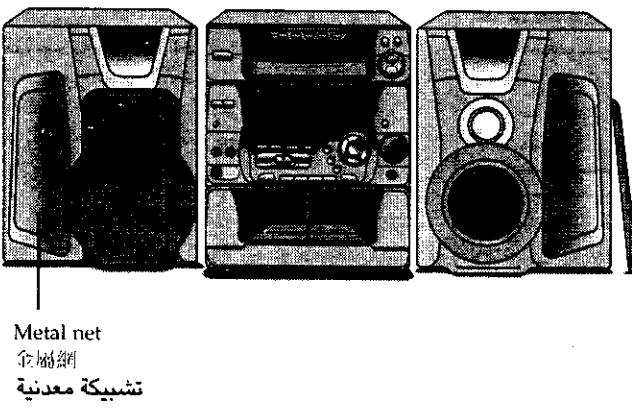
Insert the batteries in the correct polarities (+, -).
要極性 (+, -) 正確地插入電池。
(-) (+) باتریاں باتکاب صحتیہ



B



C



Battery installation

Use of batteries

- Do not mix old and new batteries, or batteries of different types (manganese and alkaline, etc.).
- Never subject batteries to excessive heat or flame; do not attempt to disassemble them; and be sure they are not short-circuited.
- If the remote control is not to be used for a long period of time, remove the batteries and store them in a cool, dark place.
- Do not attempt to recharge alkaline or manganese batteries.
- Do not use rechargeable type batteries.

Battery life

The battery life is about one year.

The batteries should be replaced if commands from the remote control transmitter do not operate the unit even when the transmitter is held close to the front panel.

Correct method of use

B

Operations notes

- Do not place obstacles between the remote control signal sensor and remote control unit.
- Do not expose the remote control signal sensor to direct sunlight or to the bright light of an inverter fluorescent light.
- Take care to keep the remote control signal sensor and end of the remote control unit free from dust.
- If this system is installed in a rack with glass doors, the glass doors' thickness or color might make it necessary to use the remote control a shorter distance from the system.

To prevent damage

- Never place heavy items on top of the unit.
- Do not disassemble or reconstruct the unit.
- Do not spill water or other liquids into the unit.

Placement of speakers

Place the speakers so that the metal net is on the outside. **C**

For your reference

- You can take the front net off speakers.
- For your listening pleasure, keep your speakers from touching the system.

Connections

Basic connections

Plug the AC power cord into a household AC outlet only after all other connections have been made.

1 FM indoor antenna

Tape the antenna to a wall or column, in a position where radio signals are received with the least amount of interference.

For best reception sound quality:

An FM outdoor antenna is recommended. (See page 10.)

2 AM loop antenna

After attaching the antenna, turn on the system and tune in a broadcast station. Then, turn the antenna to the angle of best reception and least interference.

3 ① Connect the right (R) and left (L) speaker cords (pin type).

② Connect the right (R) and left (L) speaker cables.

Notes

- To prevent damage to circuitry, never short-circuit positive (+) and negative (-) speaker wires.
- Be sure to connect only positive (red) wires to positive (+) terminals and negative (black) wires to negative (-) terminals.

4 (Only when your system has VOLT ADJ)

Set the voltage.

Use a flat-head screwdriver to turn the voltage selector on the rear panel to the appropriate position for the area in which this system is used.

If the power supply in your area is 115 V or 120 V, please set the voltage selector as follows:

- For 115 V: Set to 110V.
- For 120 V: Set to 127V.

5 AC power supply cord

(For areas except Hong Kong)

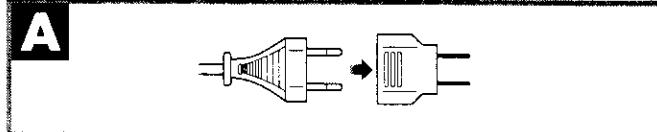
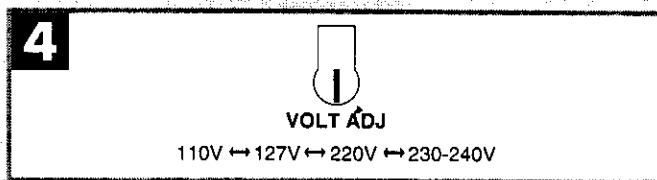
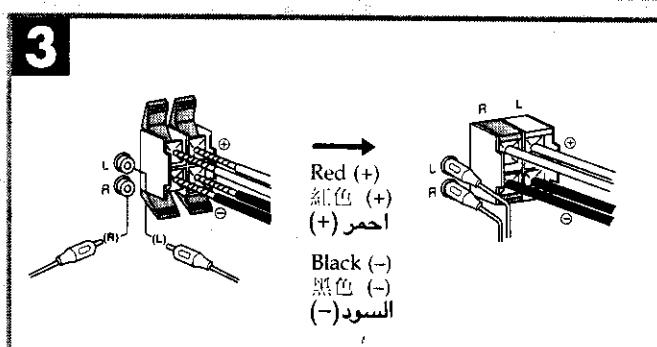
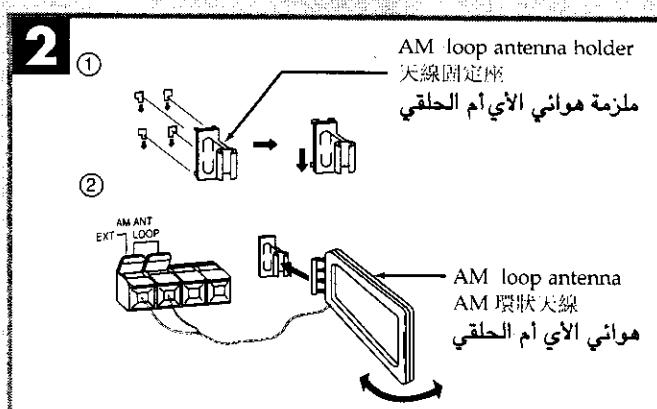
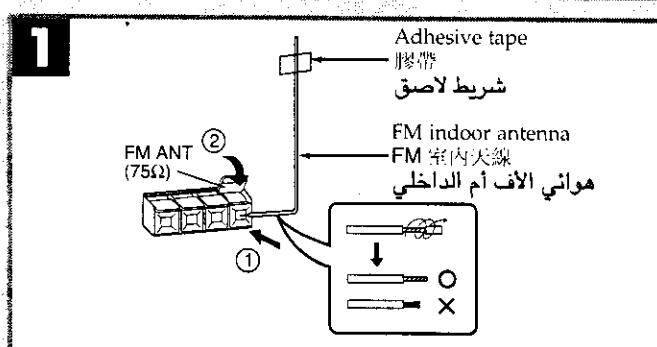
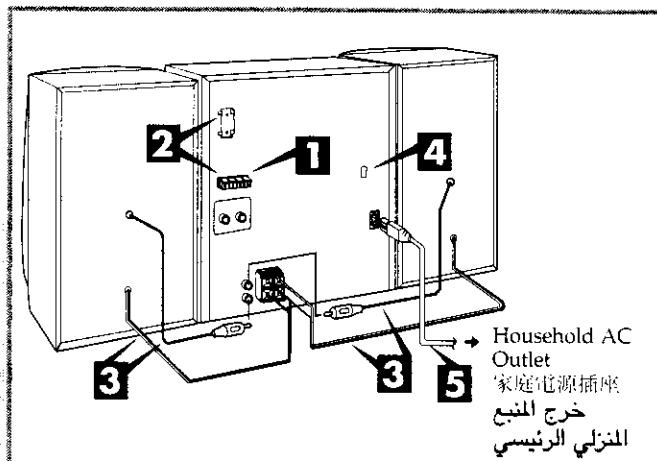
If the power plug does not fit your socket, use the power plug adaptor (included) **A**.

Caution

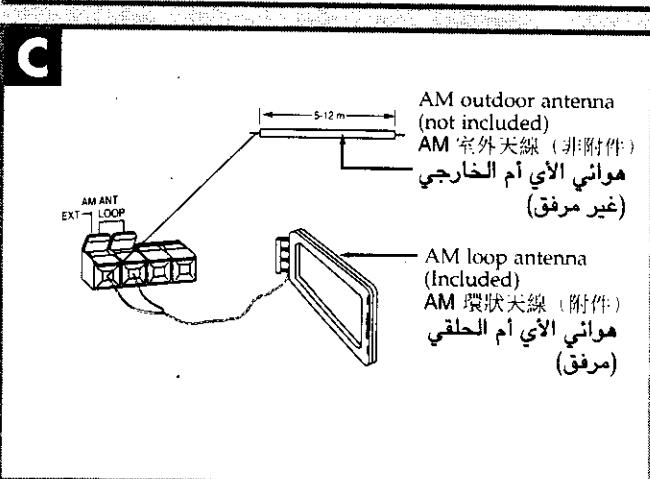
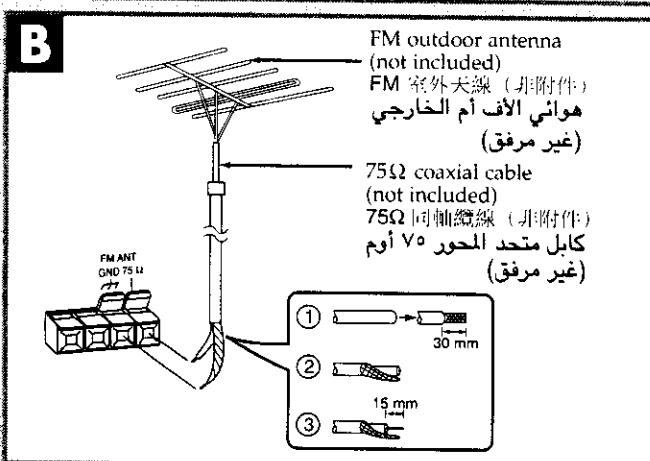
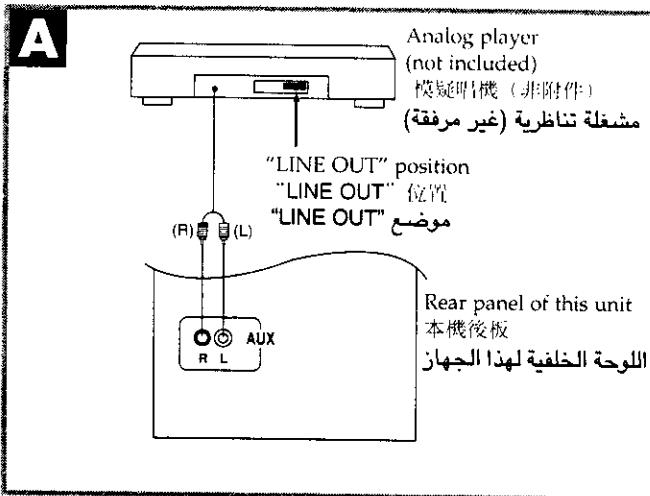
Use the speakers only with the recommended system.

Failure to do so may lead to damage to the amplifier and/or the speakers, and may result in the risk of fire.

Consult a qualified service person if damage has occurred or if you experience a sudden change in performance.



Connections



External unit connection

A

- For details, refer to the instruction manual of the units which are to be connected.
- This example shows how to connect the analog player with the PHONO OUT/LINE OUT switch.
- When units other than those described below are to be connected, please consult with your audio dealer.

Notes

- Only an analog player with a built-in phono equalizer can be connected.
- Set the switch to the "LINE OUT" position at the back of the analog player.

Optional antenna connections

A

You may need an outdoor antenna if you use this system in a mountainous region or inside a reinforced-concrete building, etc.

FM outdoor antenna **B**

B

Disconnect the FM indoor antenna if an FM outdoor antenna is installed.

Note

An outdoor antenna should be installed by a competent technician only.

AM outdoor antenna **C**

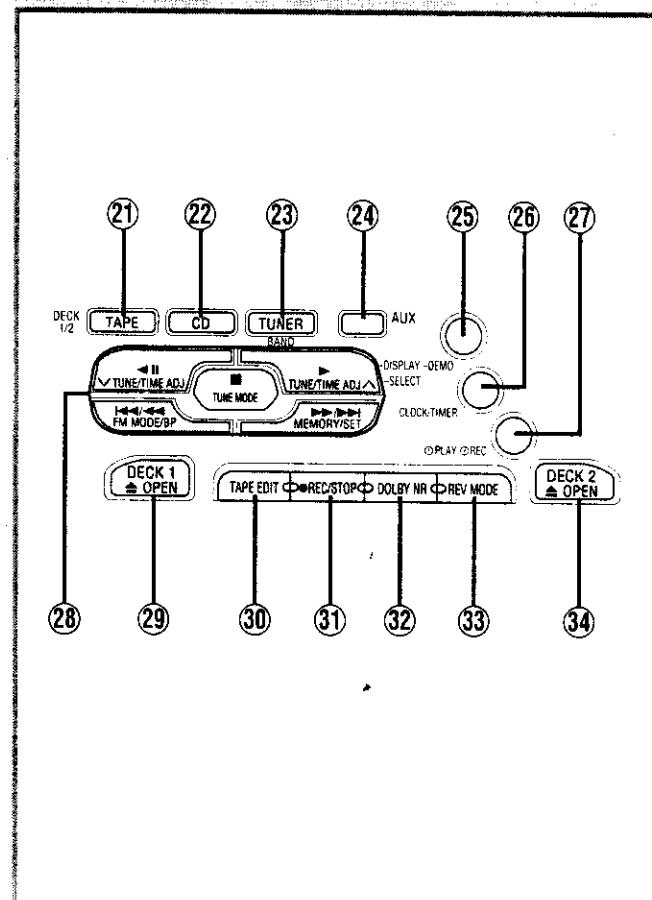
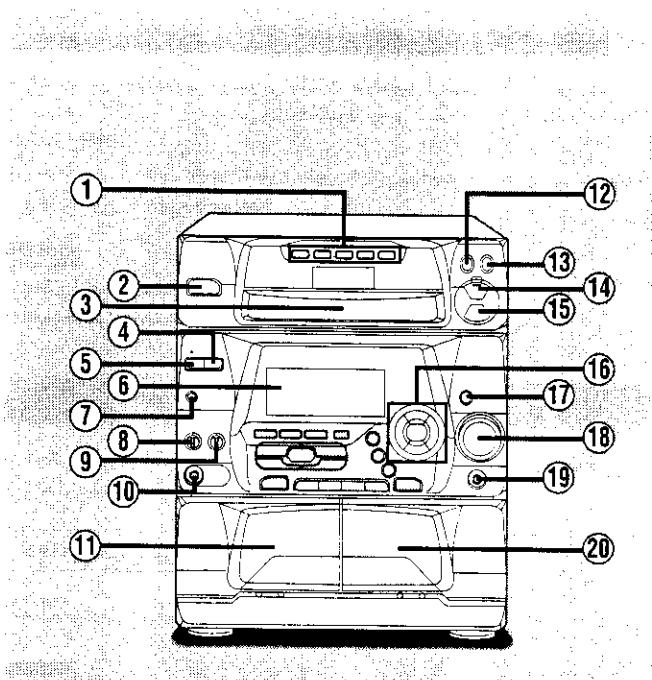
C

Connect the outdoor antenna without removing the AM loop antenna. Run 5 to 12 m of vinyl-covered wire horizontally along a window or other convenient location.

Note

When the unit is not in use, disconnect the outdoor antenna to prevent possible damage that may be caused by lightning. Never use an outdoor antenna during an electrical storm.

Front panel controls



① Disc select buttons and indicators (DISC 1-DISC 5)

② Power "STANDBY \ominus ON" switch

(POWER, STANDBY \ominus ON)

Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power

③ Disc tray

④ Super woofer level select button (LEVEL)

⑤ Super woofer ON/OFF button (SUPER WOOFER)

⑥ Display

⑦ Karaoke button (KARAOKE)

⑧ Microphone volume control (MIC VOL)

⑨ Echo volume control (ECHO)

⑩ Microphone jack (MIXING MIC)

⑪ Deck 1 cassette holder

⑫ Disc tray open/close button (Δ OPEN/CLOSE)

⑬ Disc check open button (OPEN, -NEXT/-AUTO)

⑭ CD manager button (CD MANAGER)

⑮ Random play button (RANDOM)

⑯ 3D space EQ button (3D SPACE EQ)

⑰ Muting button (MUTING)

⑱ Volume control (VOLUME)

⑲ Headphone jack (PHONES)

⑳ Deck 2 cassette holder

㉑ Tape/deck select button (TAPE, DECK 1/2)

㉒ CD button (CD)

㉓ Tuner/band select button (TUNER/BAND)

㉔ AUX button (AUX)

㉕ Display select/demonstration button (-DISPLAY/-DEMO)

㉖ Clock/timer button (CLOCK/TIMER)

㉗ Play timer/record timer button (\odot PLAY/ \odot REC)

㉘ Basic operating buttons

Buttons change according to the source.

㉙ Deck 1 open button (DECK 1, Δ OPEN)

㉚ Tape edit button (TAPE EDIT)

㉛ Recording start/stop button (\bullet REC/STOP)

㉜ Dolby noise reduction button (DOLBY NR)

㉝ Reverse mode select button (REV MODE)

㉞ Deck 2 open button (DECK 2, Δ OPEN)

Demo function

The demo function changes the display to an air plane taking off from an airport.

Turning the demo function ON/OFF

Press POWER and hold down -DISPLAY/-DEMO.
Every time you hold down the button:

DEMO (ON) ↔ NO DEMO (OFF)

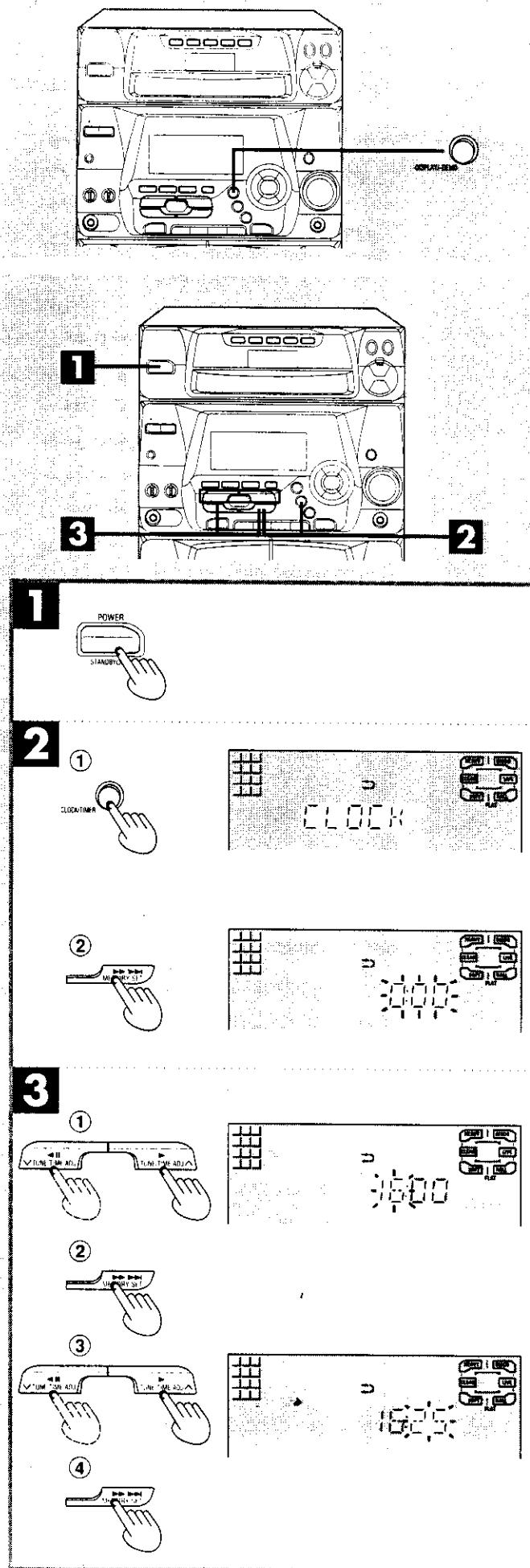
When the demo function is ON, the demo is played automatically in the following cases.

• When power is ON

If the input source is set to CD or tape, and the system is left on standby for more than 2 minutes.

• When power is OFF

If the clock has not been set.



Setting the time

This is a 24-hour display clock.

This example in the figure shows how to set the time for 16:25 (4:25 p.m.).

1 Switch on the power.

2 ① Press CLOCK/TIMER to select CLOCK.

Every time you press the button;

CLOCK → ⊖REC → ⊖PLAY
Previous display

② (within 5 seconds or so) Press MEMORY/SET.

3 ① Press V or A to select the hour.

② Press MEMORY/SET.

③ Press V or A to select the minutes.

④ Press MEMORY/SET to finish setting the time.

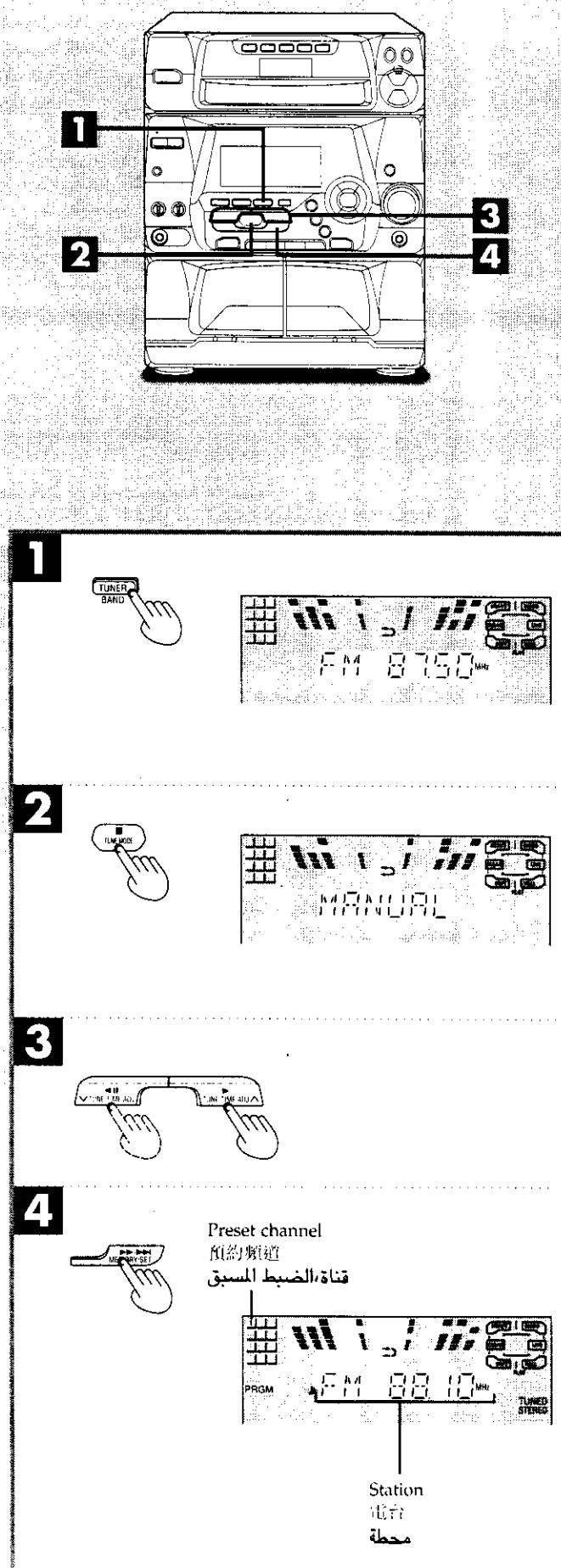
The display will return to whatever was displayed before you set the time.

To display the time when power is ON

Press CLOCK/TIMER to select "CLOCK".

The time will be displayed for about 5 seconds and then the display will return to whatever was previously displayed.

Presetting radio broadcasts



- Up to 12 stations can be set in each band with the automatic or manual memory presetting.
- If broadcast frequencies are preset in the memory, you can easily tune in any of these frequencies from the system or remote control unit.
- You can preset just those stations you like. (See "Presetting only your favorite stations" below.)

1 Press TUNER BAND to select band.

The power will come on automatically.
Every time you press the button; FM \leftrightarrow AM.

2 Press TUNE MODE to select "MANUAL".

Every time you press the button; MANUAL \leftrightarrow PRESET.

3 Press V or A until the display shows the frequency from which you want to begin automatic memory presetting.

Tips on tuning in radio stations

- Hold down either arrow button until the frequency numbers start scrolling.
- When near to the frequency you are looking for, press the button repeatedly until tuning the broadcast in.

4 Press and hold MEMORY/SET until the frequency begins to change.

This will start presetting automatically. When finished, the radio will tune in last station memorized.

If auto presetting is not possible because radio signals are weak or for some other reason, do the following.

Presetting only your favorite stations

Preset the stations one at a time.

- Perform above steps 1 and 2. Then, select a station with V and A, and press MEMORY/SET. "PRGM" will flash on the display.
- While "PRGM" is flashing, select a preset channel with V or A, and press MEMORY/SET again. "PRGM" will go out and the station will be stored in memory.

Memory retention

Your preset frequencies are retained in memory for about 2 weeks while the system is unplugged.

AM allocation settings:

This system comes equipped with an electronic digital tuner that divides the broadcast band into many small steps. These steps match the assignable broadcast frequencies and intervals in between.

Each country allocates broadcast bands according to their particular needs.

By adjusting the allocation, you can enable the tuner to receive AM broadcasts allocated in 10 kHz steps.

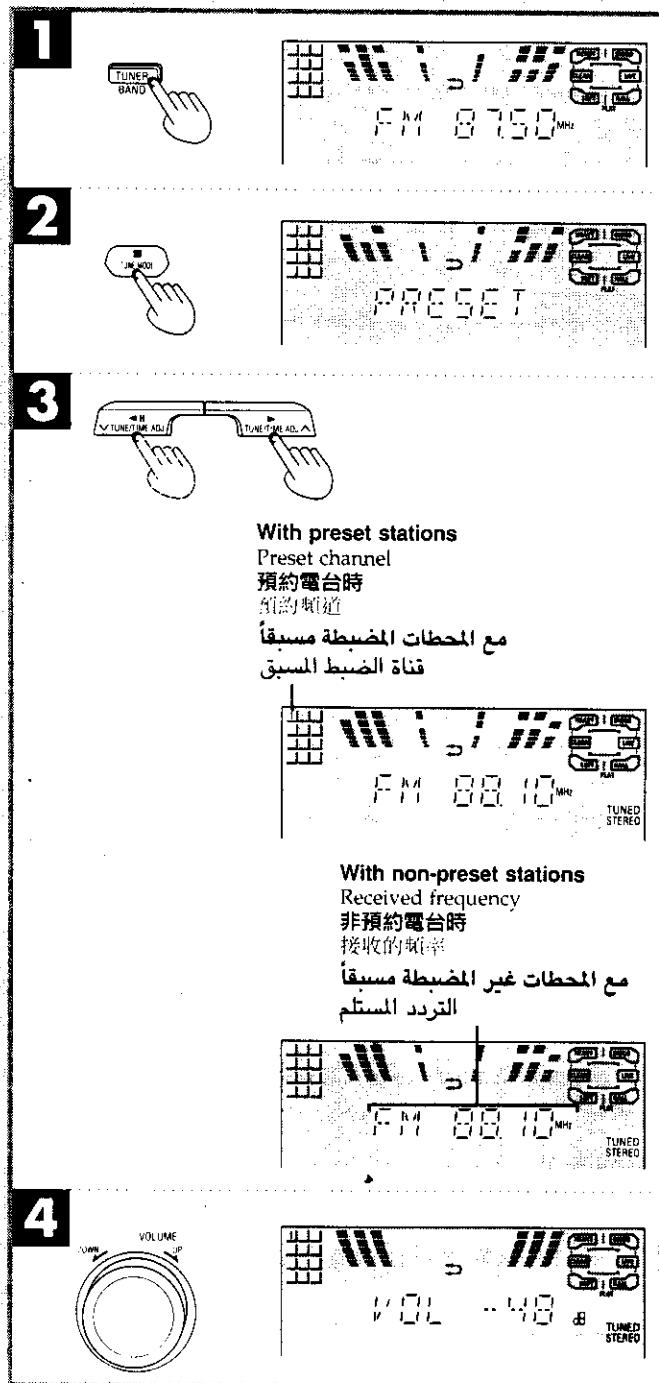
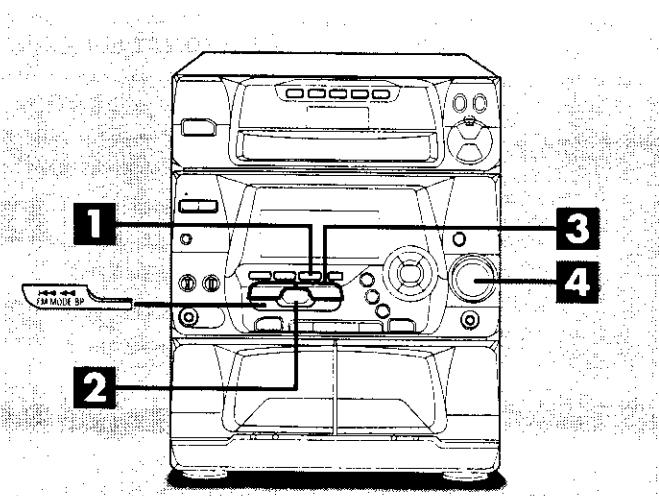
- Press TUNER BAND to select AM.
- Press and hold TUNER BAND. As the flashing display will show the minimum frequency of the AM band after 5 seconds, continue to hold TUNER BAND for 5 more seconds.
- When the display stops flashing and indicates a different frequency number, release TUNER BAND.

To return to the original frequency indication, repeat steps 1 to 3 above.

Note

After changing the "allocation" setting, the frequencies you previously preset in the memory will be cleared.

Listening to radio broadcasts



1 Press TUNER BAND to select band.

The power will come on automatically.
Every time you press the button; FM ↔ AM.

2 Press TUNE MODE to select "PRESET" or "MANUAL".

Every time you press the button; MANUAL ↔ PRESET.

PRESET: For preset stations

MANUAL: For non-preset stations

3 Press \vee or \wedge to select the desired broadcast.

"STEREO" lights when an FM stereo broadcast is being received. "TUNED" lights when you precisely tune in a broadcast station.

4 Adjust the volume level.

Auto tuning

Auto tuning is an easy way to tune in non-preset stations ("MANUAL" is displayed).

Hold down either \vee or \wedge , and release the button when the frequency starts scrolling.

The radio will stop automatically on the first station it picks up.

- When there is outside interference, the radio may stop on a non-broadcast frequency. Hold down either \vee or \wedge to resume auto tuning.

To stop auto tuning

Press either \vee or \wedge again.

If noise is excessive in the FM stereo mode

Press FM MODE/BP.

"MONO" will light up.

Sound will be produced in monaural, but this also reduces noise.

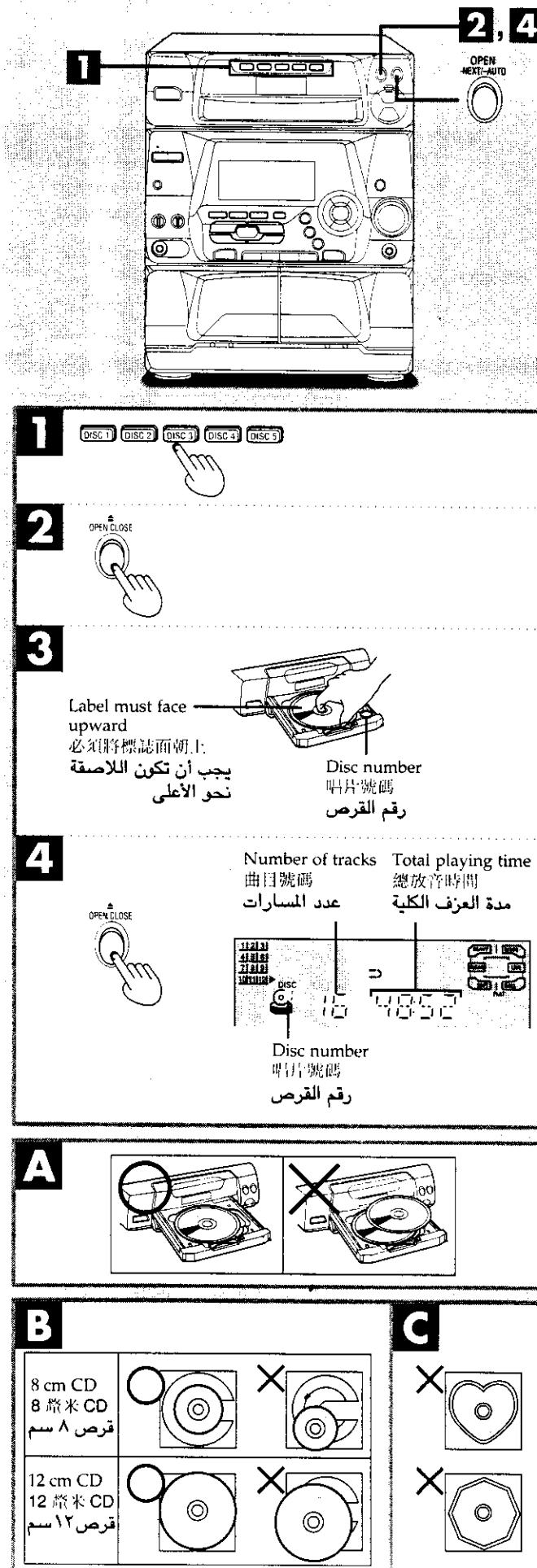
Press the button again to cancel. "MONO" will go out.

Normally, you'll want to listen in stereo, so leave "MONO" off. This way, you can listen to stereo broadcasts in stereo, and monaural broadcasts in mono.

Notes

- If you preset stations in memory, you can tune in a preset station by simply selecting the preset channel with the numeric buttons on the remote control.
- Sound is momentarily interrupted if you load/unload tapes while listening to an AM broadcast.

Listening to compact discs



Loading and checking CDs

Always stop the changer before loading or changing CDs. You cannot change CDs while a disc is playing.

How to load CDs

- 1 Press DISC 1-DISC 5, whichever you want to open.
- 2 Press Δ OPEN/CLOSE.
- 3 Set CD in the tray.
- 4 Press Δ OPEN/CLOSE.

The tray will close and the disc No., track No. and total playing time will be shown on the display.

To load several CDs consecutively

Press OPEN -NEXT/-AUTO.

Every time you press the button, the next tray will open. After loading all the CDs you want, press Δ OPEN/CLOSE and close the trays.

How to check which trays have discs

Hold down OPEN -NEXT/-AUTO.

All trays will open and close automatically, in order, one at a time.

Note

Do not try loading or changing CDs while the trays are opening and closing.

Disc indicators (DISC 1~DISC 5)

Disc indicators turn the below colors whether the said tray is loaded or not.

Green	When selected (When in the playing position)
Orange	In all other cases

To prevent damage

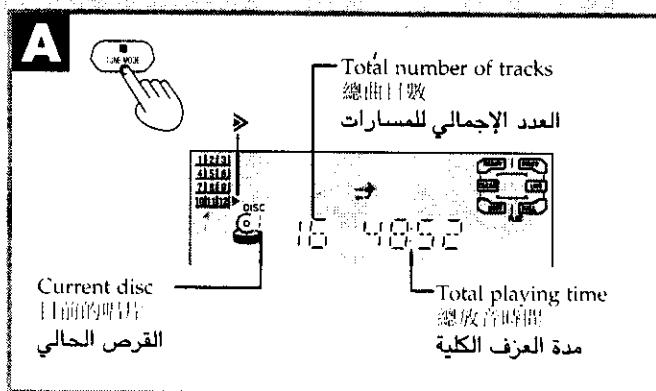
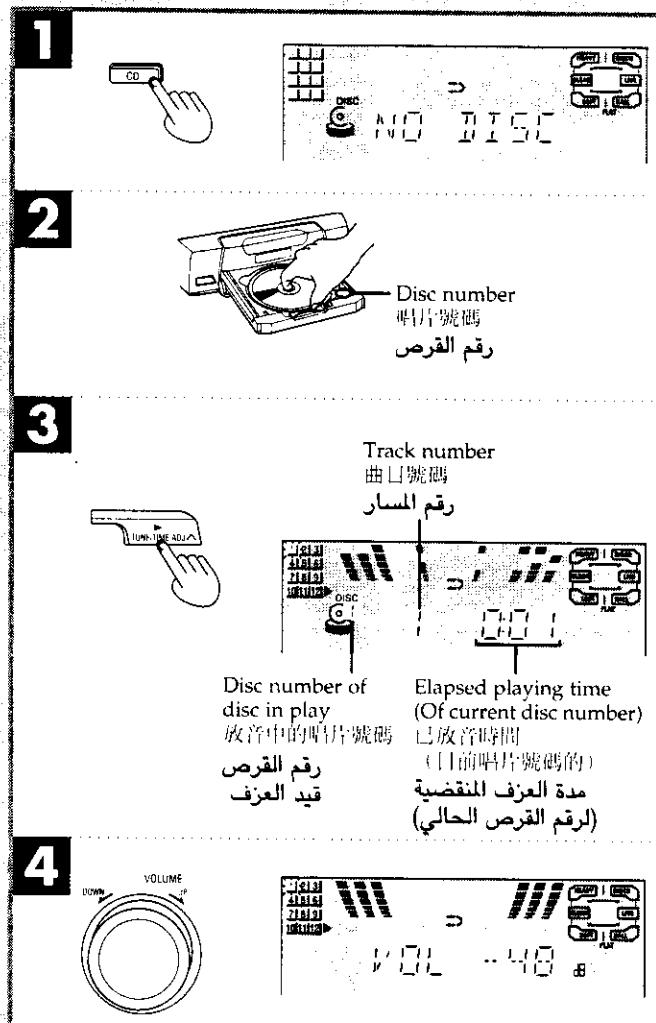
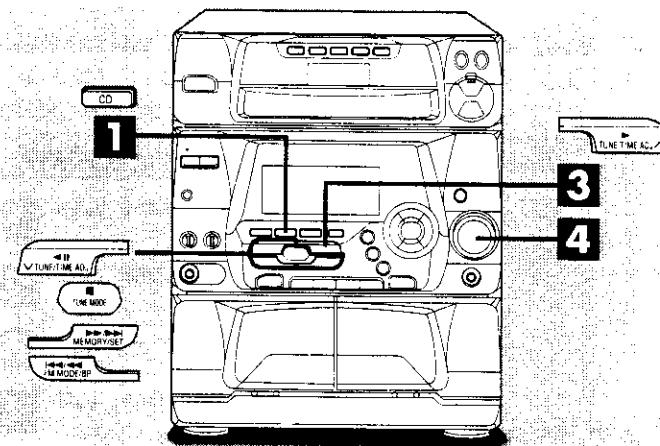
Always observe the following points.

- Load only 1 CD per tray. **A**
- Load CDs as shown in figure **B**.
The adapter is not needed with 8 cm CDs (singles).
- Set the system on a flat, level surface.
Do not set it on top of magazines, inclined surfaces, etc.
- Do not move the system while trays are opening/closing, or when loaded.

Always unload all CDs and set the system "shipping mode" (page 74) before moving the system.

- Do not put anything except CDs in trays.
- Do not use cleaning CDs or CDs which are badly warped or cracked.
- Do not use CDs with poorly attached labels or stickers.
Adhesive protruding from underneath stickers or left over from peeled off stickers can cause your stereo to malfunction.
- Do not use irregular shape CDs (heart-shape, octagonal, etc.). **C**

Listening to compact discs



Sequential play

1 Press **CD**.

The power will come on automatically.

2 Insert CDs in the trays.

(For details, see page 20.)

3 Press **▶**.

Play will start from the first track on the disc shown on the display, and will continue until playing the last track of the final disc (see below).

4 Adjust the volume level.

To stop the disc play **A**

Press **■**.

When "▶" appears on the display

It indicates there are 13 or more tracks on the disc at the playing position.

What is meant by "final disc"?

For example, if play starts from disc 4, disc 3 will be the "final disc".

Order of progression:

Disc 4→5→1→2→3

To pause	Press II during playback. To resume playback, press ▶ .
To search forward/backward (Search)	Hold down ◀◀/◀◀ (backward) or ▶▶/▶▶ (forward) during playback.
To skip forward/backward	Press ◀◀/◀◀ (backward) or ▶▶/▶▶ (forward) during playback.

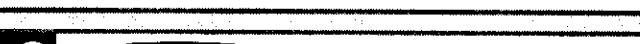
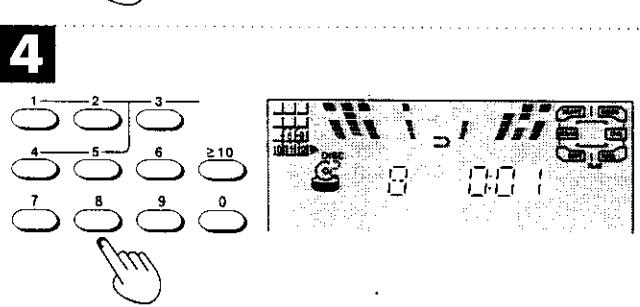
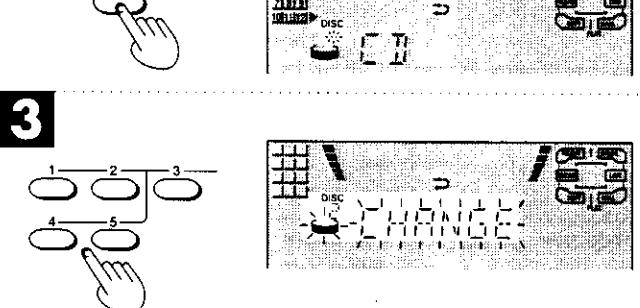
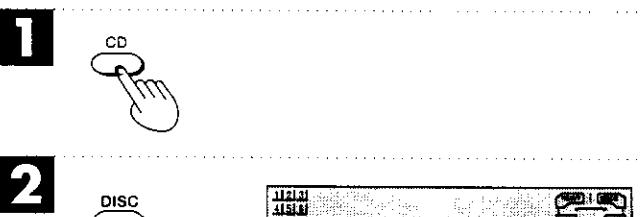
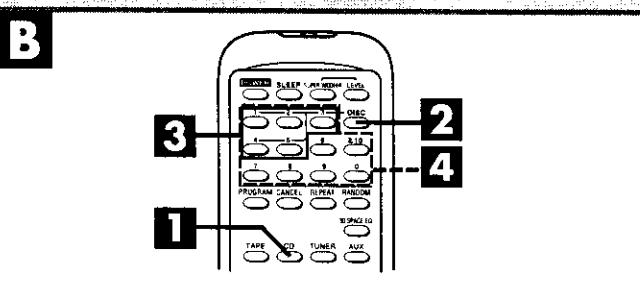
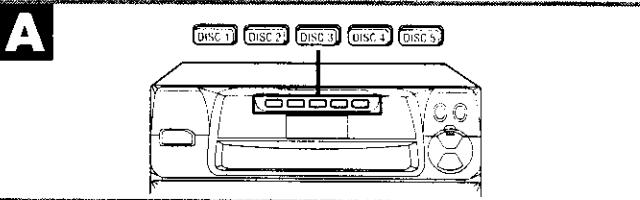
Notes

- During random play (page 24), you cannot skip to tracks which have already been played out.
- During program play (page 26) or random play, you can search forward or backward only within the current track.
- During program play, skipping is always in the programmed order, whether forward or backward.

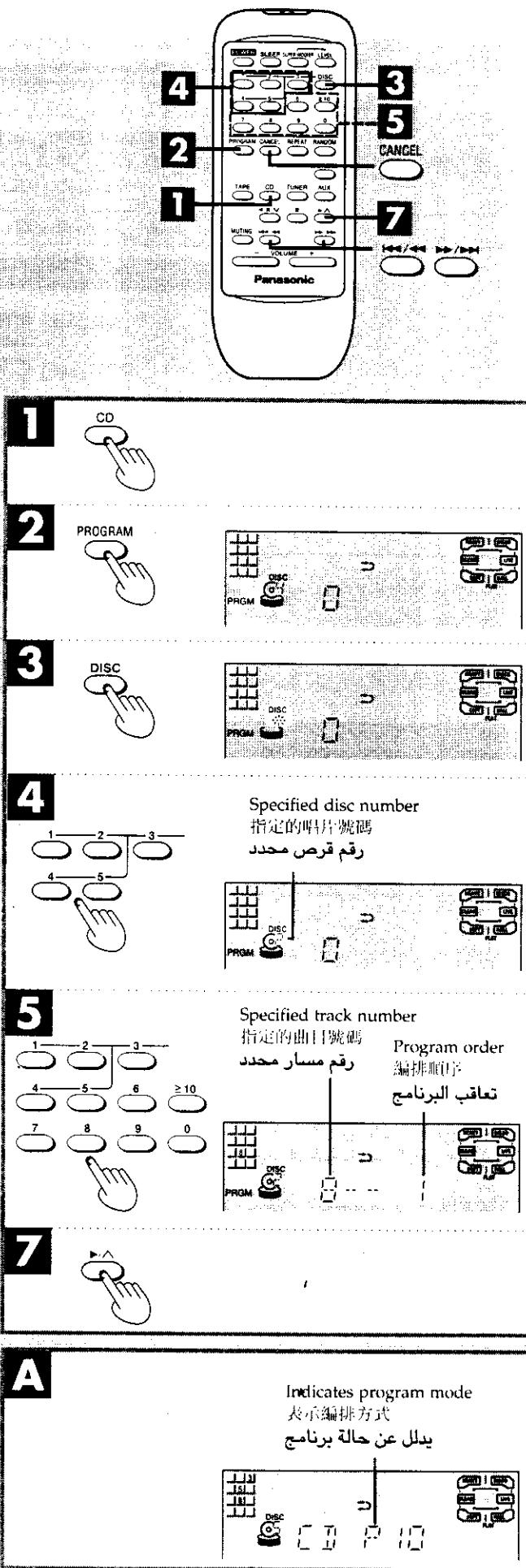
One-touch play

When power is OFF, playing starts automatically when you press **CD**.

Listening to compact discs



Listening to compact discs



Program play

by remote control only

You can program up to 24 track.

- 1** Press CD.
- 2** Press PROGRAM.
- 3** Press DISC.
- 4** (within 10 seconds or so) Press 1-5, whichever disc you want.
- 5** Press the numeric button to select the desired track.
- 6** Repeat steps 3 through 5 until you have programmed all the tracks you want.
- 7** Press ► .
Play will start in the programmed sequence.

To cancel program play mode

Press PROGRAM in the stop mode.

Programmed contents will be saved in memory.

Pressing ■ will cancel program play, but it will also erase the entire program.

To select a two-digit track

Press ≥10 and then the two numbers you want.

For example

Track no. 20: ≥10→2→0

Track no. 35: ≥10→3→5

When "CD FULL" appears

The number of programmed tracks is limited to 24. No further tracks can be programmed.

You can do the following during program mode **A**

- Check program contents.
Press ▶◀/◀◀ or ▶▶/▶▶. Everytime you press one of the buttons, the track and program No. are shown on the display.
- Add to the program.
Repeat steps 3 through 5.
- Cancel entries.

From the last programmed track.	Press CANCEL.
A specified track only.	Select the track with ▶◀/◀◀ or ▶▶/▶▶, and press CANCEL within 3 seconds.
All tracks.	Press ■.

Memory retention

Your program is retained in memory for about 2 weeks while the system is unplugged.

To replay your program

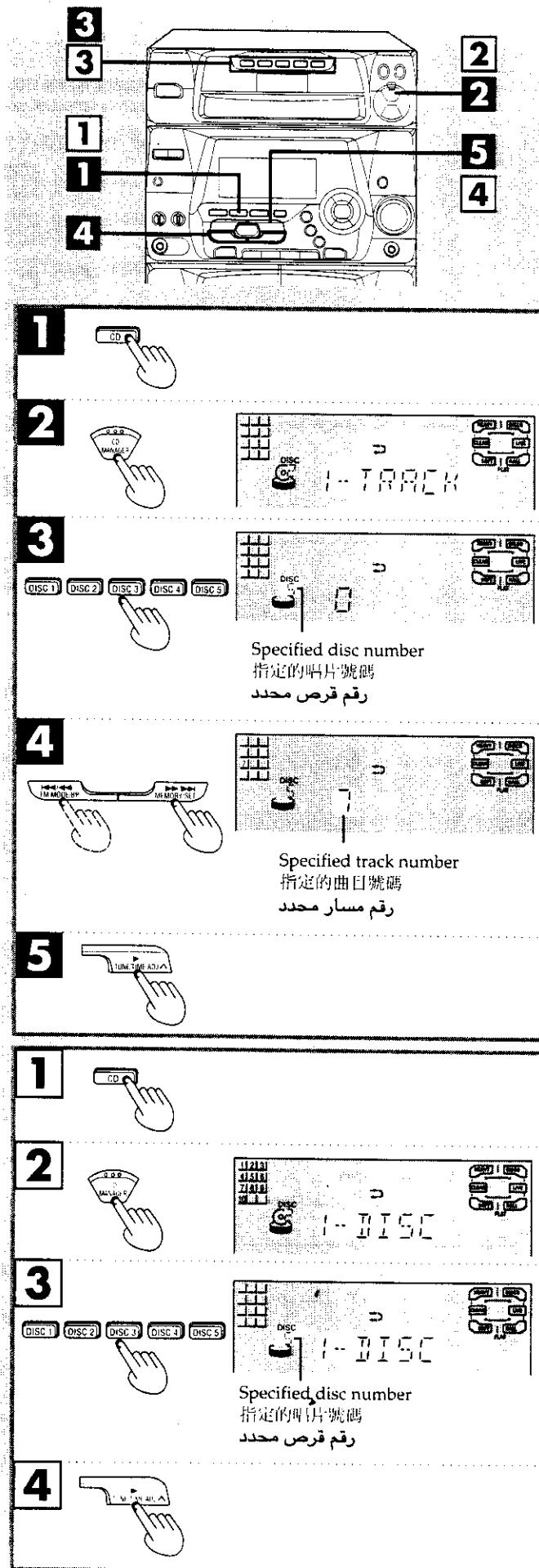
If you turn OFF your program with PROGRAM, you can play it again as explained below.

1. Press PROGRAM.
2. Press ► .

If you program a track not on your CDs

The track is initially programmed, but during program play, the player will skip that track and will continue playing from the next programmed item.

Listening to compact discs



To listen to special CDs and tracks (CD Manager function)

This function makes it easier for you to select special CDs and tracks from amongst those loaded in the player.

You can use this function to make recordings as well.

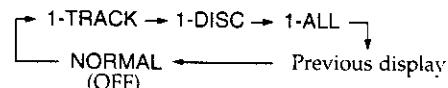
There are 3 CD/track selection modes.

- For playing back 1 track only from all loaded CDs 1-Track mode (1-TRACK)
- For playing back 1 CD only from all loaded CDs 1-Disc mode (1-DISC)
- For playing back 1 track on all loaded CDs 1-Track All-Disc mode (1-ALL)

To listen to 1 track only (1-TRACK)

1 Press CD.

2 Press CD MANAGER to select "1-TRACK".
Every time you press the button;



3 Press DISC 1-DISC 5, whichever disc you want.
Note

The button lamp of the selected CD will not change color until playback starts.

4 Press $\blacktriangleleft/\blacktriangleright$ or $\blacktriangleright/\blacktriangleright\blacktriangleright$ to select the desired track.

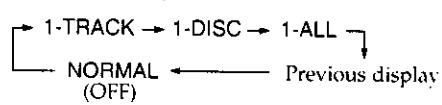
5 Press \blacktriangleright .

The selected track will start.

To listen to 1 CD only (1-DISC)

1 Press CD.

2 Press CD MANAGER to select "1-DISC".
Every time you press the button;



3 Press DISC 1-DISC 5, whichever disc you want.
Note

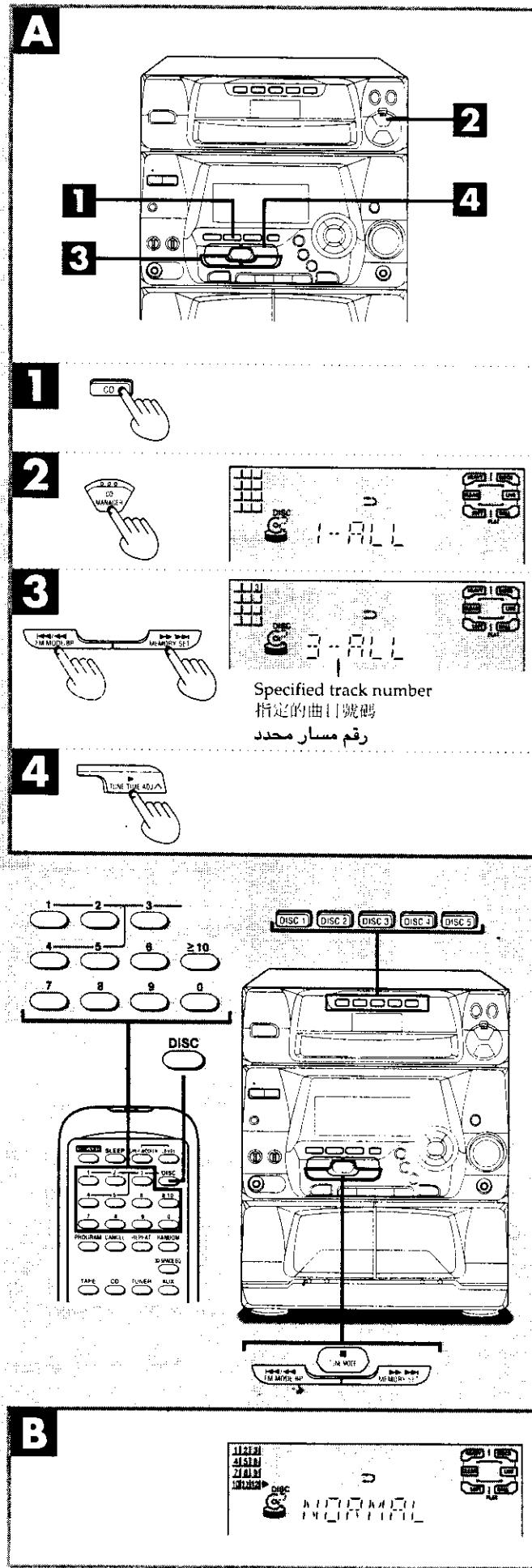
The button lamp of the selected CD will not change color until playback starts.

4 Press \blacktriangleright .

The selected CD will be played from the first track to the last.

(Continued on next page)

Listening to compact discs



To listen to special CDs and tracks (CD Manager function)

To listen to the same numbered track on all CDs (1-ALL) **A**

- 1 Press CD.
- 2 Press CD MANAGER to select "1-ALL".
Every time you press the button:
1-TRACK → 1-DISC → 1-ALL
NORMAL ← Previous display (OFF) →
- 3 Press either $\blacktriangleleft/\blacktriangleright$ or $\blacktriangleright/\blacktriangleright$ to select the desired track.
- 4 Press \blacktriangleright .
The same numbered track on CDs 1 through 5 will be played in order from CD 1 to CD 5.

When playback ends **B**

"NORMAL" will appear on the display for about 3 seconds, then the CD MANAGER function will turn OFF automatically.

To stop play

Press ■.

When you select the wrong CD or track

• 1-TRACK mode

To reselect a track on the same CD

Press either $\blacktriangleleft/\blacktriangleright$ or $\blacktriangleright/\blacktriangleright$ to select the track.

To reselect a track on another CD **by remote control only**

Press DISC on the remote control and, within 10 seconds, select a CD No. between 1 and 5. Then, select the track with the numeric buttons.

• 1-DISC mode

Reselect a CD with DISC 1-DISC 5.

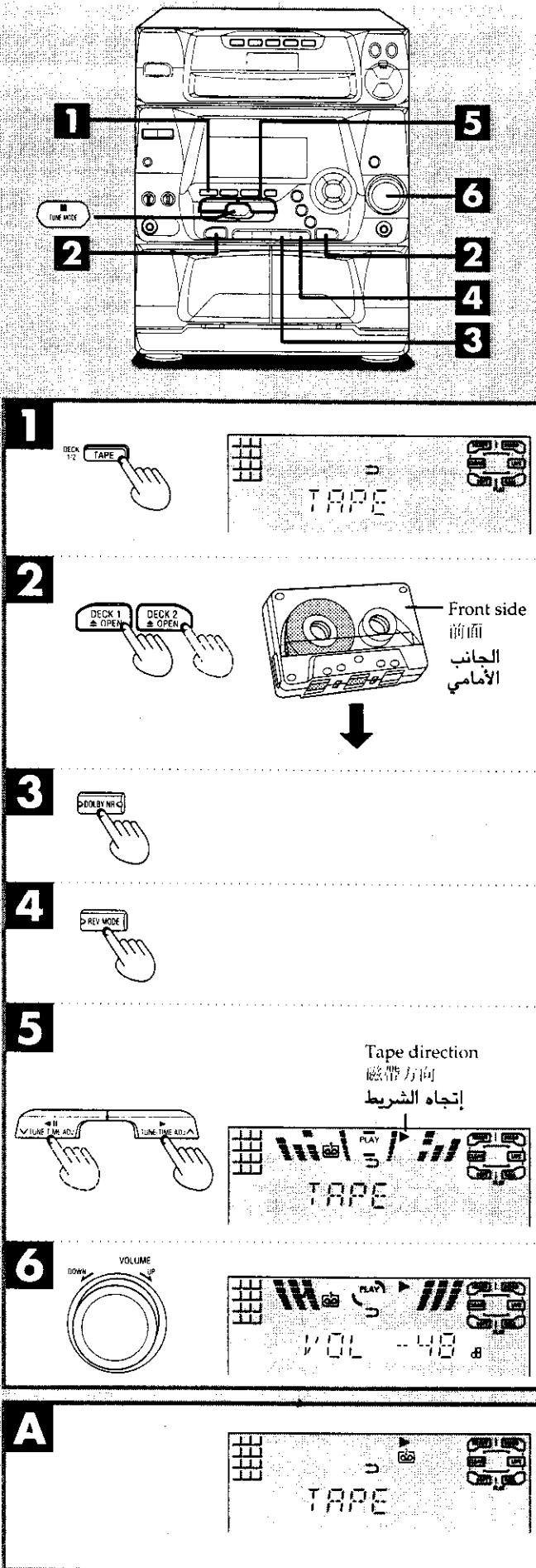
• 1-ALL mode

Reselect the track with the numeric buttons on the remote control.

Notes

- You can use the repeat function (page 24) and random play (page 24) at the same time. However, only the repeat function is available for 1-TRACK mode.
- During 1-ALL mode, you cannot skip to a disc which has already finished.
- During 1-ALL mode, if the selected track is not found on a certain CD, the player automatically skips that CD and continues playing from the next CD.

Listening to tapes



Type of tape which can be played correctly:
The unit automatically identifies the type of tape.

NORMAL POSITION/TYPE I	O
HIGH POSITION/TYPE II	O
METAL POSITION/TYPE IV	O

You can use either deck 1 or deck 2 for tape playback.

- 1 Press **TAPE DECK 1/2**.
The power will come on automatically.
- 2 Press **DECK 1 ▲ OPEN** or **DECK 2 ▲ OPEN**, and then **insert the tape**.
Insert the tape with the exposed tape facing down.
Close the holder by hand.
- 3 Press **DOLBY NR**.
You have to turn DOLBY NR ON/OFF according to the type of recording you made.
Every time you press the button: 
- 4 Press **REV MODE** to select the reverse mode.
Every time you press the button:

: One side is played, then playback stops automatically.
: Both sides (front side → reverse side) are played one time each, then playback stops automatically.
: Both sides are played 8 times each, then playback stops automatically.
- 5 Press **◀** or **▶** to start playback.
▶ : The forward side (front side) will play.
◀ : The reverse side will play.
- 6 Adjust the volume level.

To stop tape playback
Press **■**.

To change the deck to be used **A**

Press **TAPE DECK 1/2** to select the deck you want to use when you load cassettes into both decks.

To listen to 2 tapes consecutively

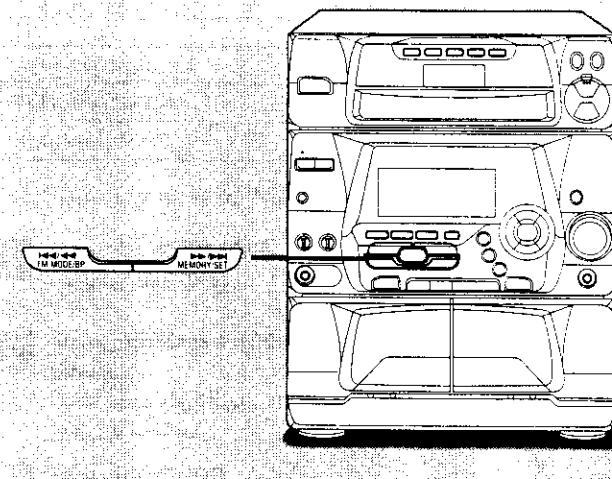
Load a tape into each deck and select . Both tapes will be played 8 times each.

Note

Playback is interrupted while playing back tapes, if you open the other deck.

One-touch play

When power is OFF, playing starts automatically when you press **TAPE DECK 1/2**.



Listening to tapes

To fast-forward or rewind the tape

Press **◀◀/◀◀** or **▶▶/▶▶** in the stop mode.

Tape direction	To rewind	To fast-forward
"▶"	◀◀/◀◀	▶▶/▶▶
"◀"	▶▶/▶▶	◀◀/◀◀

To find the beginning of a program (TPS: Tape Program Sensor)

Press **◀◀/◀◀** or **▶▶/▶▶** during play.

Tape direction	To play the current tune from the beginning	To play the next tune from the beginning
"▶"	◀◀/◀◀	▶▶/▶▶
"◀"	▶▶/▶▶	◀◀/◀◀

Notes

The TPS function searches for silent parts of about 4 seconds in length which are normally found between tunes. As a result, it may not function properly in the following cases

- With short silent parts
- When noise occurs between tunes
- With silent parts found within tunes

About Dolby noise-reduction system

The Dolby noise-reduction system is designed to effectively reduce the annoying high-frequency "hissing" noise typical of cassette tapes. During recording, the system functions to increase the high-frequency sound level, the sound, and then, during playback, that same portion is weakened to bring it back to the previous level.

The DOLBY NR effect is obtained using a Dolby type makes recording and playback the same.

This unit includes the Dolby B NR-type.

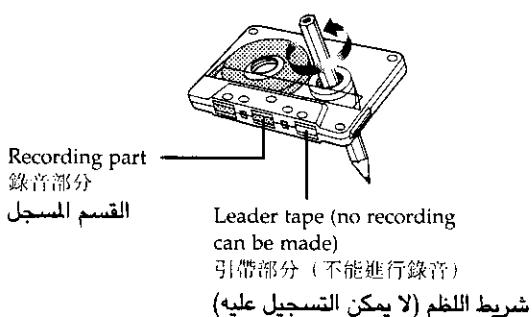
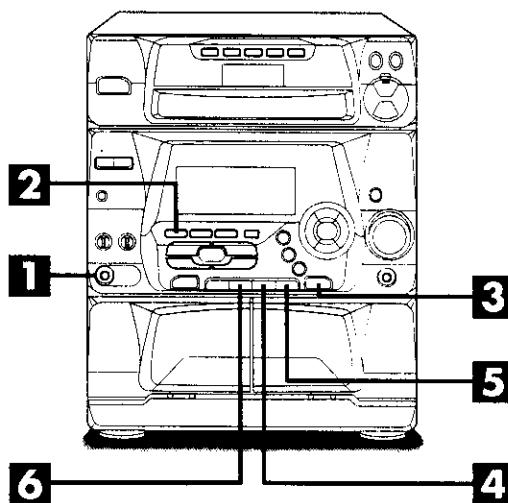
Dolby B NR-type

Noise is reduced to about one-third.

Dolby noise reduction manufactured under license from Dolby Laboratories Licensing Corporation.

"DOLBY" and the double-D symbol  are trademarks of Dolby Laboratories Licensing Corporation.

Before recording (Deck 2 only)

A**B**

Type of tape which can be recorded correctly

The unit automatically identifies the type of tape.

NORMAL POSITION/TYPE I	<input type="radio"/>
HIGH POSITION/TYPE II	<input type="radio"/>
METAL POSITION/TYPE IV	<input checked="" type="radio"/>

This system cannot make a recording or erasing correctly, if metal position tapes are used.

To record from the beginning of the tape **A**

You cannot record on the leader part of the tape. Before recording, wind the tape past the leader to a point where recording can start immediately.

How volume, sound quality/field and Super woofer affect recording

The tape you are recording is not affected whatever by changes in volume, sound quality/field or super woofer.

- In recording, sound quality/field are set automatically to "FLAT".
- You can change volume and super woofer effect for the playback sound.

To erase a recorded sound **B**

1 Disconnect the microphones.

2 Press TAPE DECK 1/2.

3 Insert the recorded tape into deck 2.

4 Press DOLBY NR so that the Dolby NR indicator goes off.

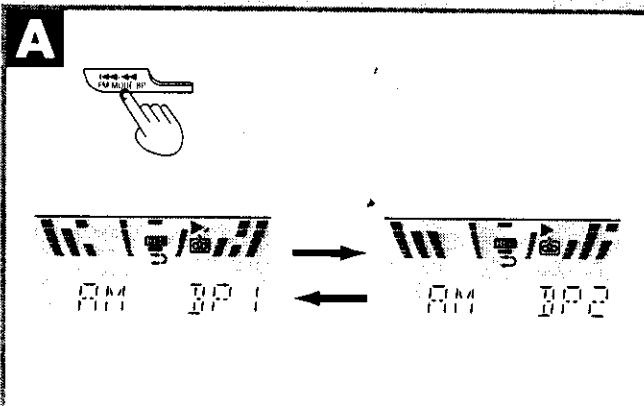
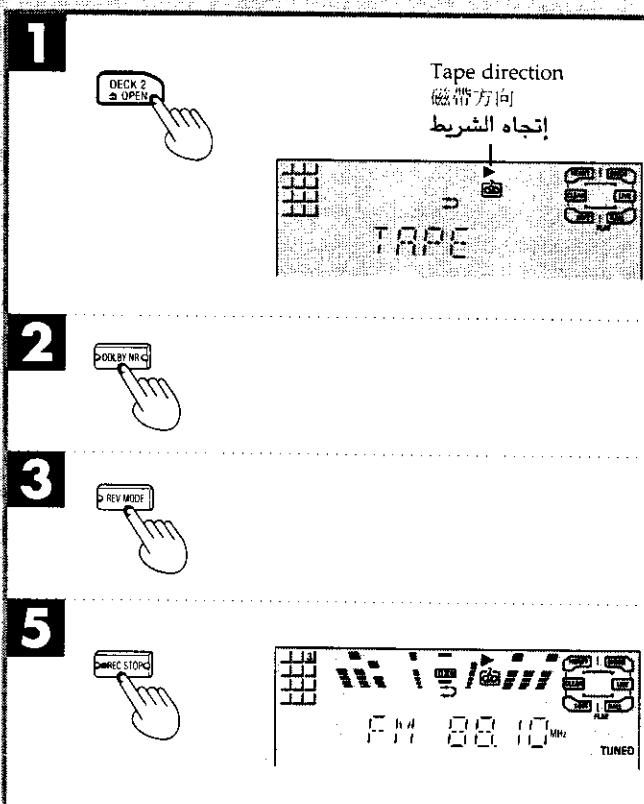
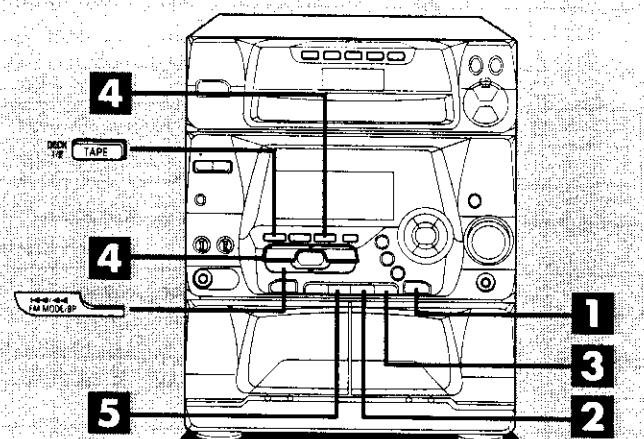
5 Press REV MODE to select reverse mode.

6 Press ● REC/STOP.

Notes

- You cannot open the deck 1 while recording.
- You cannot fast-forward or rewind one deck while recording with the other.

Recording from radio broadcasts



1 Press DECK 2 ▲ OPEN, and then insert the tape.

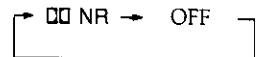
Close the holder by hand.

Tape direction is automatically set to "►".

2 Press DOLBY NR.

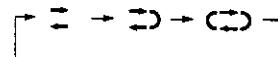
You have to turn Dolby NR ON/OFF according to the type of recording you want to make.

Every time you press the button:



3 Press REV MODE to select the reverse mode.

Every time you press the button:



► : One side is recorded, then recording stops automatically.

↔ : Both sides (front side → reverse side) are recorded, then recording stops automatically.

4 Select a radio station. Perform steps 1 through 3 on page 18.

5 Press ● REC/STOP to start recording.

If you selected ↔ in step 3, the direction will automatically change to ► when recording starts.

To stop recording

Press ● REC/STOP again.

Recording can also be stopped by pressing ■.

To start recording on reverse side

Load a tape and change the tape direction as explained here below.

1. Press TAPE DECK 1/2 and select tape deck 2.
2. Press ▲ and immediately thereafter ■. The tape direction will be shown as "◀".

To record from a specific point on a tape

Before recording, advance the tape to the point from where you want to start recording.

To cut an unnecessary part while recording

1. Press ● REC/STOP when hearing an unnecessary part. The cassette deck will go into the stop mode.
2. Press ● REC/STOP when wanting resume recording again. Recording will continue in the same direction as before.

Note

When recording an AM broadcast, volume is momentarily interrupted when you start and stop the recording.

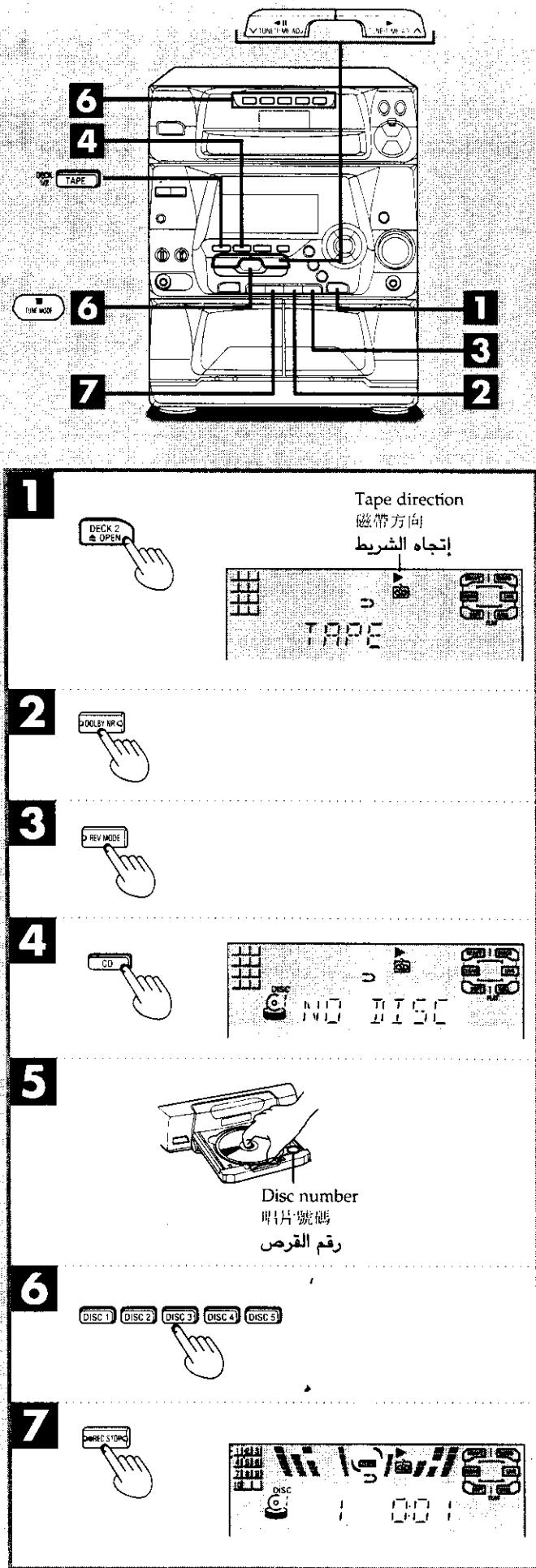
To reduce the noise while AM recording (Beat proof function) A

Press FM MODE/BP while recording.

Each time you press the button, "BP 1" and "BP 2" will be displayed alternately.

Select the position where there is less noise.

Recording from compact discs



1 Press DECK 2 ▲ OPEN, and then insert the tape.

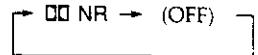
Close the holder by hand.

Tape direction is automatically set to "►".

2 Press DOLBY NR.

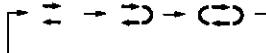
You have to turn Dolby NR ON/OFF according to the type of recording you want to make.

Every time you press the button:



3 Press REV MODE to select the reverse mode.

Every time you press the button:



► : One side is recorded, then recording stops automatically.

↔, ◌ : Both sides (front side → reverse side) are recorded, then recording stops automatically.

4 Press CD.

5 Load CDs into each of the trays.

(See page 20).

6 Press DISC 1 – DISC 5 whichever disc you want.

Pressing ■ will stop playback.

7 Press ● REC/STOP to start recording.

- If you selected ◌ in step 3, the direction will automatically change to ► when recording starts.
- The recording will proceed from the first track on the selected CD and will continue on through the last track of the final disc (page 22).
- The tape deck stops automatically when the CD is finished.

To stop recording

- To add a 4 second silent interval before stopping

Press ■. The CD will stop automatically too.

- To stop recording without a silent interval

Press ● REC/STOP. The CD will stop automatically too.

To start recording on reverse side

Load a tape and change the tape direction as explained here below.

1. Press TAPE DECK 1/2 and select tape deck 2.
2. Press ▲ and immediately thereafter ■. The tape direction will be shown as ▲.

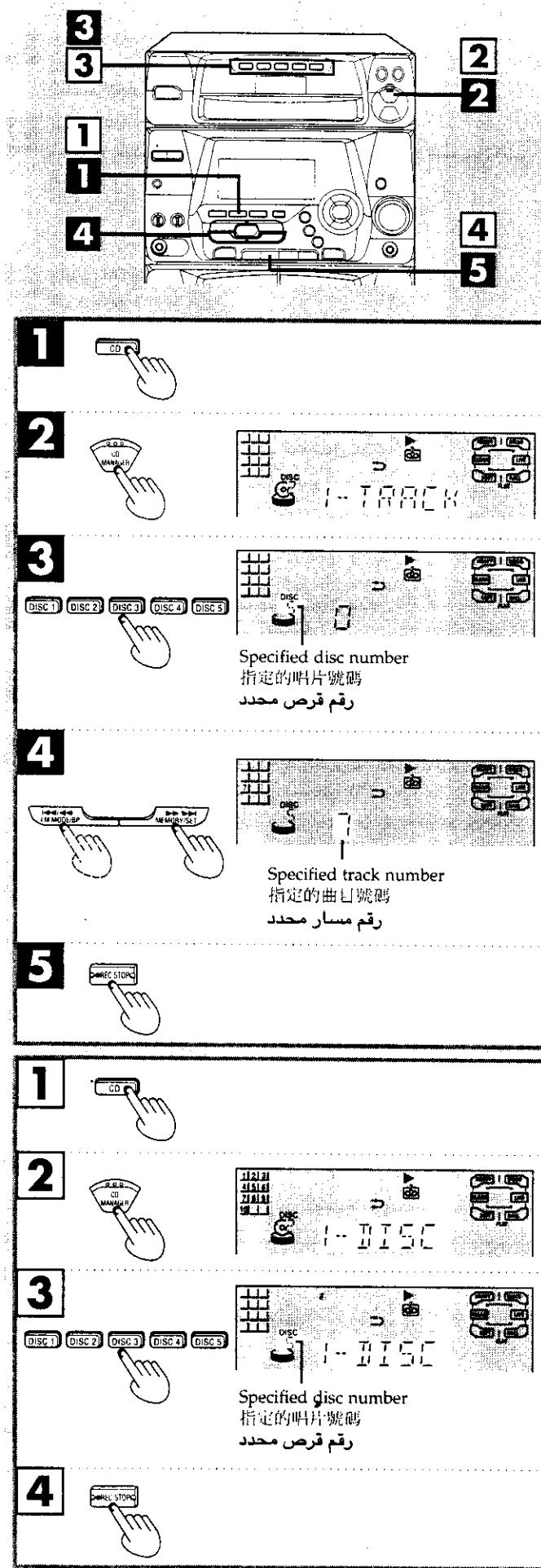
To record from a specific point on a tape

Before recording, advance the tape to the point from where you want to start recording.

To record programmed tracks

1. After step 5, program the track you want (performs steps 2~6 on page 26.)
2. Press ● REC/STOP to start recording.

Recording from compact discs



To record special CDs and tracks (CD Manager function)

This function makes it easier for you to select special CDs and tracks from amongst those loaded in the player.

- While recording, if a track is cut off in the middle at the end of the front side, it is re-recorded from the beginning, on the reverse side.
- Recording is interrupted definitively at the end of reverse side.

Before recording

Prepare the tape you want to use. Performs steps 1 through 3 on page 40.

To record 1 track only (1-TRACK)

1 Press CD.

2 Press CD MANAGER to select "1-TRACK".

Every time you press the button:

→ 1-TRACK → 1-DISC → 1-ALL →
NORMAL ← Previous display
(OFF)

3 Press DISC 1-DISC 5, whichever disc you want.

Note

The button lamp of the selected CD will not change color until playback starts.

4 Press </< or >/> to select the desired track.

5 Press ● REC/STOP.

The selected track will be recorded.

To record 1 CD only (1-DISC)

1 Press CD.

2 Press CD MANAGER to select "1-DISC".

Every time you press the button:

→ 1-TRACK → 1-DISC → 1-ALL →
NORMAL ← Previous display
(OFF)

3 Press DISC 1-DISC 5, whichever disc you want.

Note

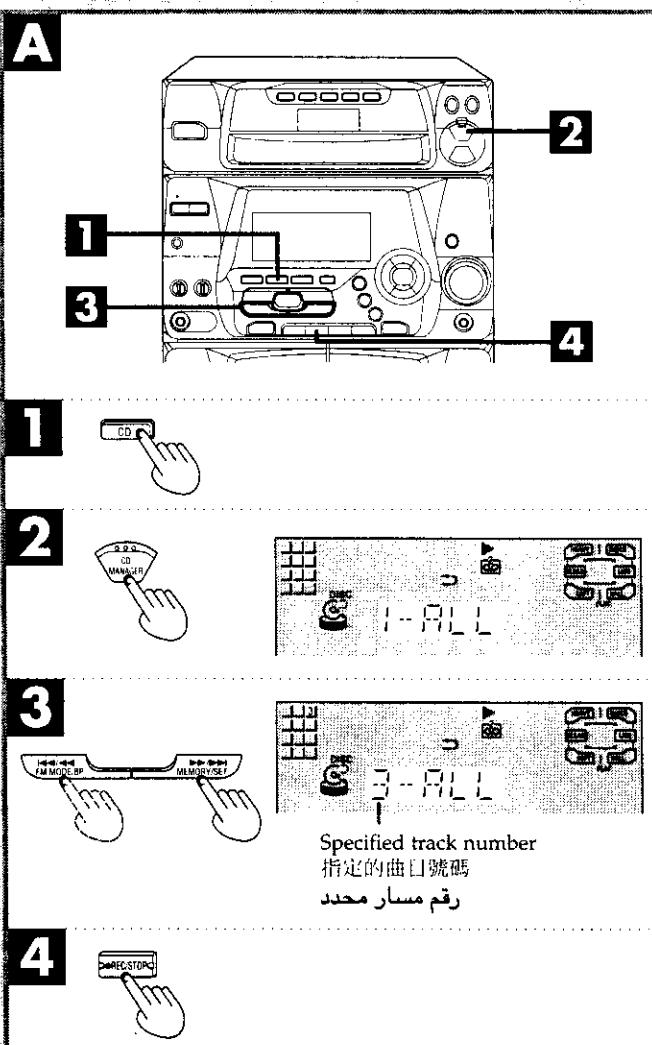
The button lamp of the selected CD will not change color until playback starts.

4 Press ● REC/STOP.

The selected CD will be recorded.

(Continued on next page)

Recording from compact discs



To record special CDs and tracks (CD Manager function)

To record the same numbered track on all CDs (1-ALL) **A**

1 Press CD.

2 Press CD MANAGER to select "1-ALL".

Every time you press the button:

→ 1-TRACK → 1-DISC → 1-ALL
NORMAL ← Previous display (OFF)

3 Press \ll or \gg to select the desired track.

4 Press ● REC/STOP.

The same numbered track on CDs 1 through 5 will be recorded in order from CD 1 to CD 5.

When recording ends **B**

"NORMAL" will appear on the display for about 3 seconds, then the CD MANAGER function will turn OFF automatically.

To stop recording

- To add a 4 second silent interval before stopping
Press ■. The CD will automatically stop too.
- To stop recording without a silent interval
Press ● REC/STOP. The CD will stop automatically too.

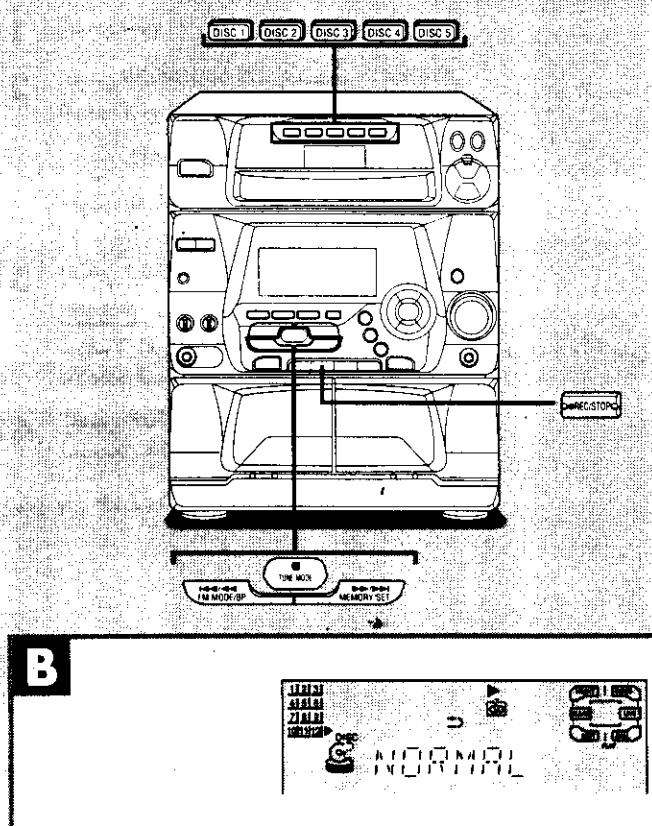
When you select the wrong CD or track

The same reselection procedure is used with all three modes. Perform this procedure before recording starts.

- To reselect a CD
Reselect the CD with DISC 1 ~ DISC 5.
- To reselect a track
Reselect the track with \ll or \gg .

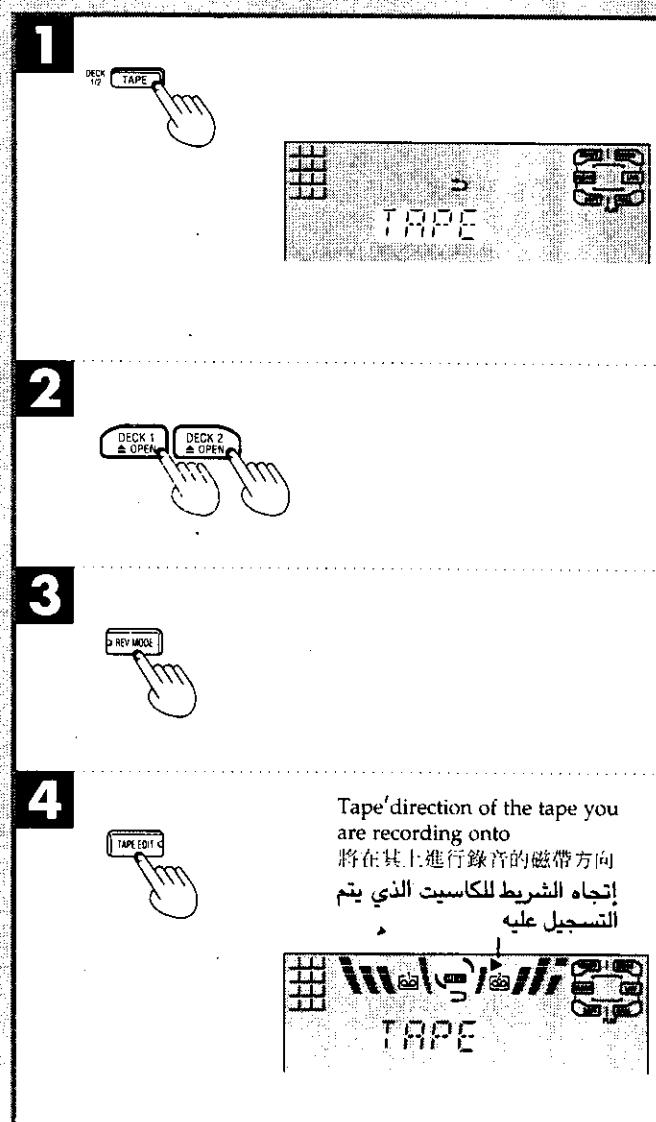
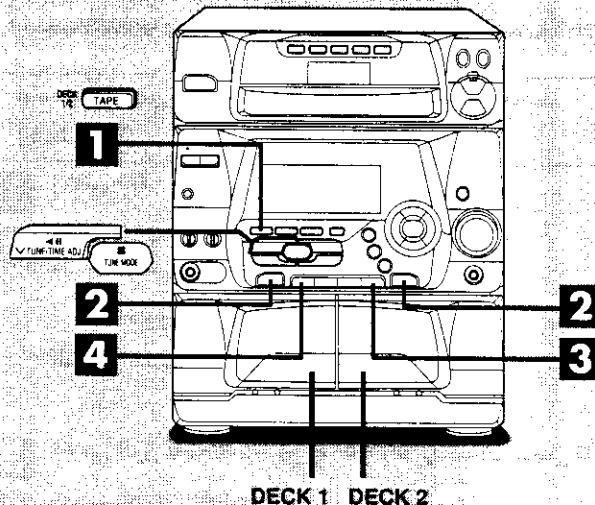
For your reference

During 1-ALL mode, if the selected track is not found on a certain CD, the player automatically skips that CD and continues recording from the next CD.



Tape-to-tape recording

The recording level and the Dolby effect will be recorded as they are on the tape being played back.



1 Press TAPE DECK 1/2.

2 Press Δ OPEN on both decks, and then insert the tapes.

For playback: Into deck 1

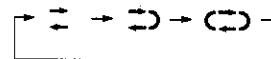
For recording: Into deck 2

Close each deck's holder by hand.

Tape direction is automatically set to "►".

3 Press REV MODE to select the reverse mode.

Every time you press the button:



\square : One side is recorded, then recording stops automatically.

\square, \square : Both sides (front side → reverse side) are recorded, then recording stops automatically.

4 Press TAPE EDIT to start recording.

- If you selected \square in step 3, the direction will automatically change to \square when recording starts.

To stop recording:

Press ■.

Both decks will stop.

To start recording on reverse side

Load a tape and change the tape direction as explained here below.

- Press TAPE DECK 1/2 and select tape deck 2.
- Press \blacktriangleleft and immediately thereafter ■. The tape direction will be shown as "◀".

To record from a specific point on a tape

Before recording, advance the tape to the point from where you want to start recording.

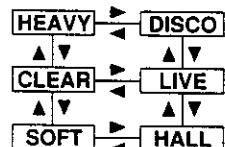
Sound quality, field, etc.

Selecting sound quality and field □

Base your selection on the type of music and how you want to listen to it.

1 Press 3D SPACE EQ.
"FLAT" goes out.

2 Select sound quality and field with **◀, ▶, ▲, ▼** and **▲**.
Rotation changes with each button as shown below.



HEAVY: Use to add "punch" to rock and other music.

CLEAR: Use to clarify the treble range of jazz, etc.

SOFT: Use to listen to background music, etc.

DISCO: Use to reproduce a long reverberating sound like that heard in discotheques.

LIVE: Use primarily for vocal pieces to add gloss to the vocals.

HALL: Use to impart a deep bass and spread which will make you feel as if you were in a large concert hall.

Note

In recording, the sound quality/field will set automatically to "FLAT".

To cancel the mode:

Press 3D SPACE EQ and check "FLAT" lights up.

To boost bass □

You can adjust bass below 120 Hz to 5 different levels.

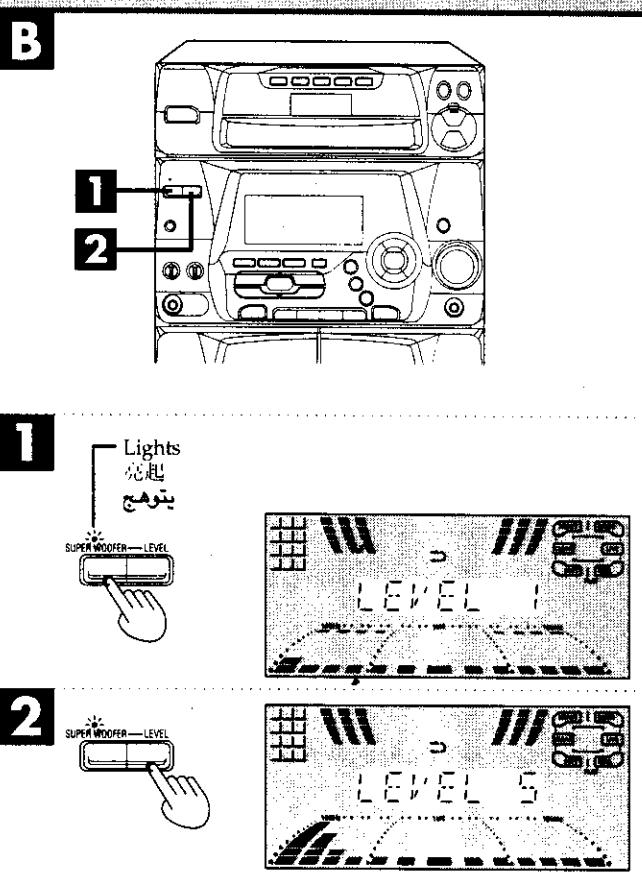
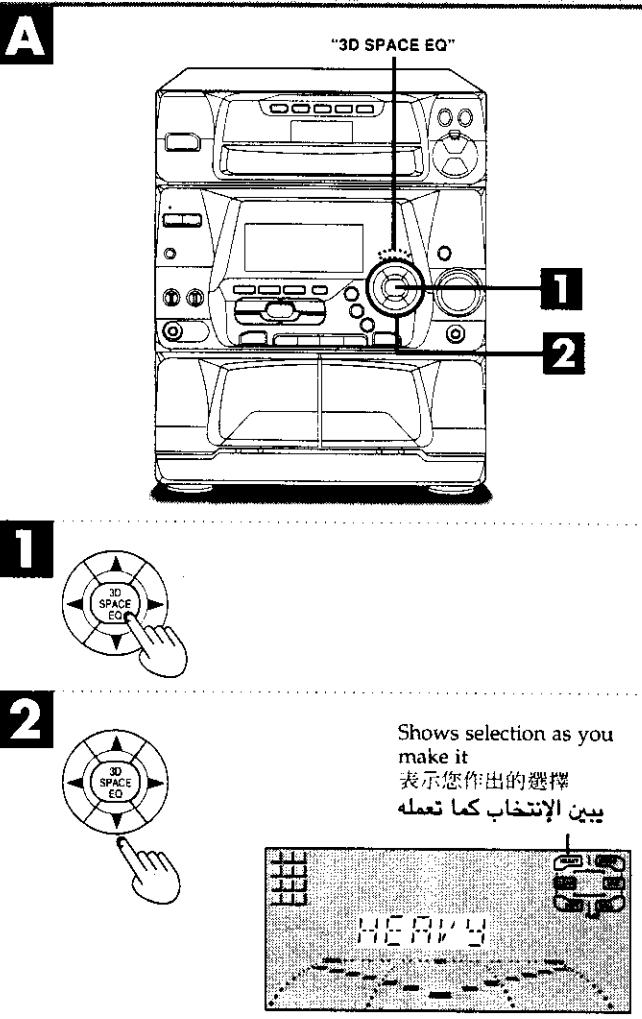
1 Press SUPER WOOFER.
(The indicator lights up.)

2 Press LEVEL to select the desired level.

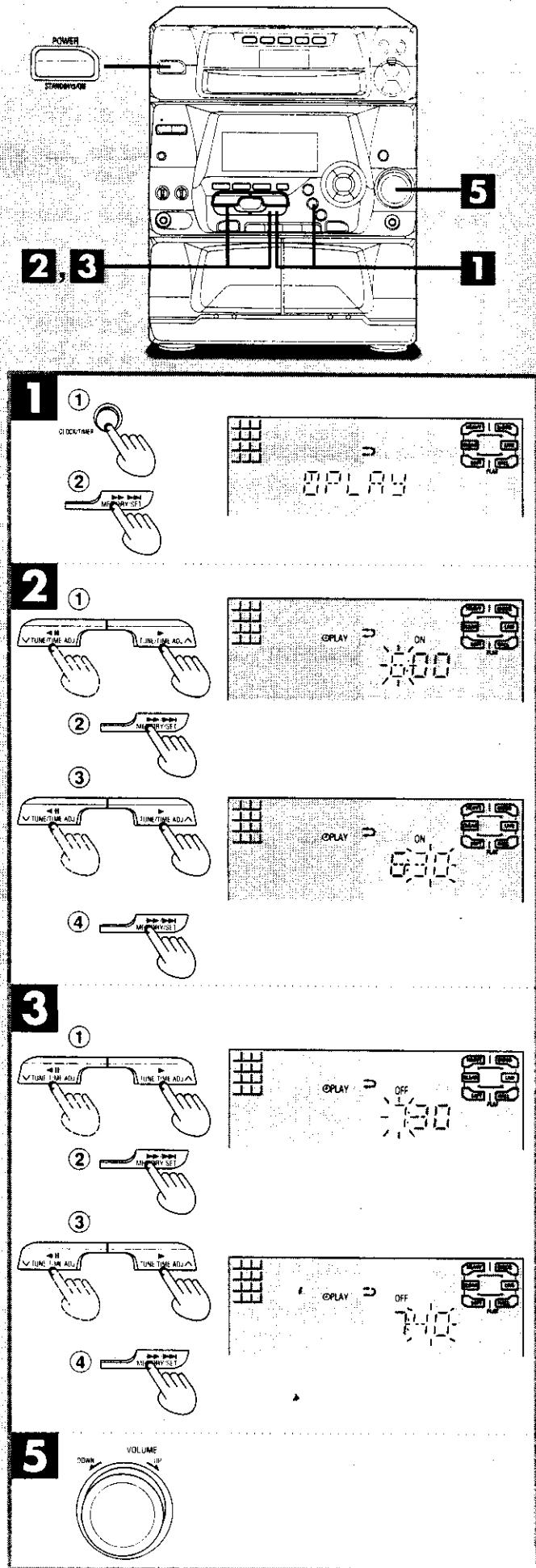
Each time you press the button, the level indication will change consecutively from "LEVEL 1" through to "LEVEL 5".

To cancel the mode:

Press SUPER WOOFER again.



Using the play timer



Select this timer when you want to use the timer as an alarm clock. You can wake up with listening to music (CD, tuner, tape or aux) at a desired volume level and time.

Preparations

- Make sure that you have completed "Setting the time" on page 14.
- Switch on the power.

The figure shows how to set the play timer for playing a CD from 6:30 to 7:40.

1 Press CLOCK/TIMER to select "OPLAY".

- ① Every time you press the button:
CLOCK → OREC → OPLAY

Previous display ←

- ② (Within 10 seconds or so)
Press MEMORY/SET.

2 "ON" time setting

- ① Press V or A to select the starting hour.
- ② Press MEMORY/SET.
- ③ Press V or A to select the starting minutes.
- ④ Press MEMORY/SET.

3 "OFF" time setting

- ① Press V or A to select the ending hour.
- ② Press MEMORY/SET.
- ③ Press V or A to select the ending minutes.
- ④ Press MEMORY/SET.

4 Source selection

Select the desired source and then prepare for playing.

When you play CD(s)

Press CD and insert CD(s).

If more than 1 CD is loaded

Press DISC 1 ~ DISC 5 to select the CD you want to hear first, and press ■.

When you play tape(s)

Press TAPE DECK 1/2 and insert tape(s).

If tapes are loaded in both decks, playback will start from deck 2.

When you play the radio

Press TUNER BAND and tune in the desired station.

When you play a unit connected to the "AUX" terminals

Press AUX.

5 Play volume setting

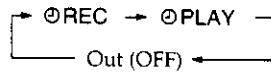
Set the playback volume.

(Continued on next page)

Using the play timer

6 Press \odot PLAY/ \odot REC to select “ \odot PLAY”.

Every time you press the button:



Power will shut OFF automatically in a few seconds.

The timer play will start at the preset time with volume increasing gradually up to the volume level you preset.

To switch the timer OFF: A

Press \odot PLAY/ \odot REC and check “ \odot PLAY” goes out.

If you set the timer wrongly A

Press \odot PLAY/ \odot REC so that “ \odot PLAY” goes out. Then, repeat the procedure from step 1.

To check settings

Press CLOCK/TIMER to select “ \odot PLAY”. B

Two seconds later, the display will change in the following order.

- ① Play start time
- ② Play end time
- ③ Play source and playback volume

You can check settings even when power is OFF.

To enjoy the desired source after the timer setting is completed

Even if you change the volume level or music source, the timer play will start with the preset condition.

1. Following step 6, turn ON the power and start playing the desired source.

Note

When you select a CD as the program source

After the CD finishes, if more than 2 CDs are loaded in the player, reset the programmed CD with DISC 1 ~ DISC 5, and press ■.

2. Press POWER to standby mode after enjoying the play, and confirm CD(s) or tape(s) has (have) been inserted.

Turning the timer ON/OFF

As long as “ \odot PLAY” is displayed, the play timer will come ON everyday as set.

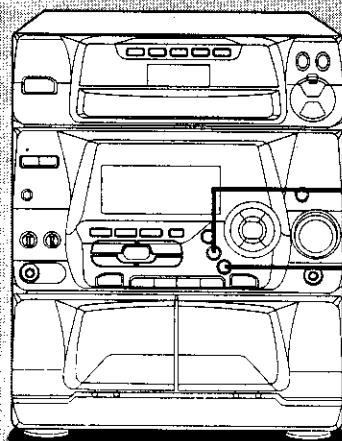
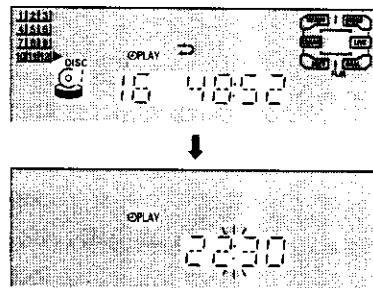
You can turn the timer ON/OFF by pressing \odot PLAY/ \odot REC while power is OFF.

Remember that when “ \odot PLAY” is displayed, the timer is ON. When not displayed, the timer is OFF.

Notes

- If the power is on, the timer will not function. The system must be in the standby mode.
- If you switch the power to the standby mode while the play timer is functioning, the OFF time setting will not be activated.
- If AUX is selected as the source, when the timer comes ON, the system will turn ON and will engage “AUX” as the source. If you want playback from the connected component to start, set the component’s timer to the same time. (See the instruction manual that came with the component.)

6



A

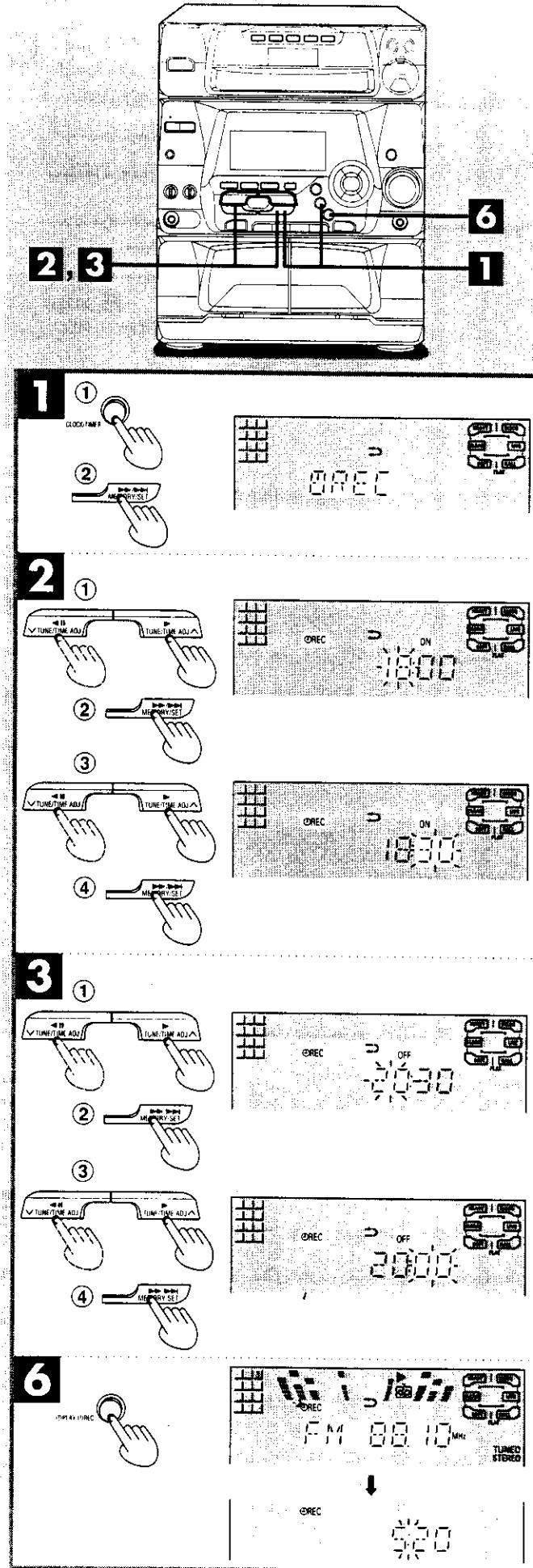
“ \odot PLAY” goes out.
“ \odot PLAY” 會消失。
“ \odot PLAY” تختفي



B

\odot PLAY

Using the record timer



Select this timer when you want to use the timer to record a midnight program or while you are out.

Preparations

- Make sure that you have completed "Setting the time" on page 14.
- Switch on the power.

Set the timer at least 2 minutes before you want to start recording.

The figure shows how to set the record timer for recording FM broadcasts from 18:30 to 20:00.

1 Press CLOCK/TIMER to select "REC".

① Every time you press the button;

CLOCK → REC → PLAY
Previous display

② (Within 10 seconds or so)
Press MEMORY/SET.

2 "ON" time setting

- ① Press V or A to select the starting hour.
- ② Press MEMORY/SET.
- ③ Press V or A to select the starting minutes.
- ④ Press MEMORY/SET.

3 "OFF" time setting

- ① Press V or A to select the ending hour.
- ② Press MEMORY/SET.
- ③ Press V or A to select the ending minutes.
- ④ Press MEMORY/SET.

4 Source selection

Select the desired source and then prepare for recording.

When you record from the radio

Press TUNER BAND to select the band and tune in the desired station.

When you record from a unit connected to the "AUX" terminals

Press AUX.

5 Prepare for recording.

1. Insert a tape into deck 2 with the side on which the recording will start facing you.
2. Select Dolby NR.
3. Select the reverse mode.

6 Press REC/PLAY to select "REC".

Every time you press the button;

REC → PLAY
(OFF)

Power will shut OFF automatically in a few seconds.

About 30 seconds before the set time, the stereo mutes all sound automatically. Recording will start from front side (►).

(Continued on next page)

Using the record timer

To switch the timer OFF: A

Press \odot PLAY/ \odot REC and check “ \odot REC” goes out.

If you set the timer wrongly A

Press \odot PLAY/ \odot REC so that “ \odot REC” goes out. Then, repeat the procedure from step 1.

To check settings

Press CLOCK/TIMER to select “ \odot REC”. B

Two seconds later, the display will change in the following order.

- ① Recording start time
- ② Recording end time
- ③ Recording source

You can check settings even when power is OFF.

To enjoy the desired source after the timer setting is completed.

Even if you change the music source, the timer recording will start with the preset condition.

1. Following step 6, turn ON the power and start playing the desired source.
2. Press POWER to standby mode after enjoying the play, and confirm a tape is inserted in deck 2.

Turning the timer ON/OFF

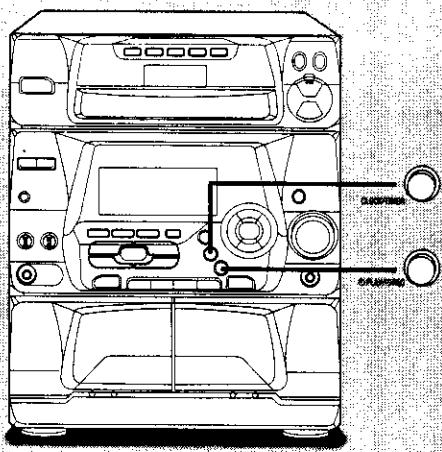
As long as “ \odot REC” is displayed, the record timer will come ON everyday as set.

You can turn the timer ON/OFF by pressing “ \odot PLAY/ \odot REC” while power is OFF.

Remember that when “ \odot REC” is displayed, the timer is ON. When not displayed, the timer is OFF.

Notes

- If the power is ON, the timer will not function. The system must be in the standby mode.
- If you switch the power to the standby mode while the record timer is functioning, the OFF time setting will not be activated.
- If AUX is selected as the source, when the timer comes ON, the system will turn ON, will engage “AUX” as the source and will start recording. If you want to record from the connected component, set the component’s timer to the same time. (See the instruction manual that came with the component.)



A

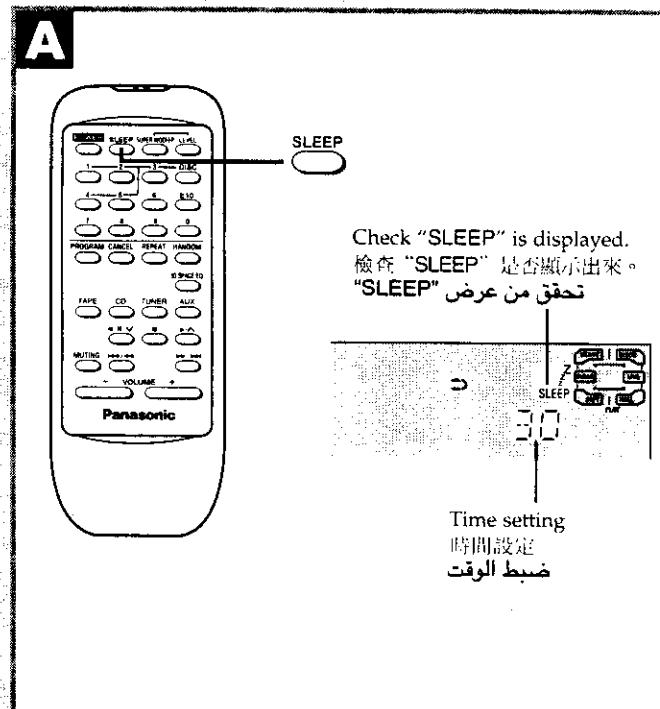
“ \odot REC” goes out.
“ \odot REC” 會消失。
“ \odot REC” تختفي



B

REC

Using the sleep timer A



This timer turns power to your system OFF at the set time (Max. 2 hours, settable at 30 minute intervals). It lets you fall asleep while listening to music.

by remote control only

Preparations

- Make sure that you have completed "Setting the time" on page 14.
- Switch on the power.

The figure shows how to set the system to standby mode after 30 minutes.

While enjoying the desired source:
Press SLEEP to select the desired time.

Every time you press the button:

→ 30 → 60 → 90 → 120 → OFF →

The system is turned off after the set time has elapsed.

To cancel the sleep timer:

Press SLEEP to select "OFF".

To confirm the remaining time:

(only while power is ON)

Press SLEEP.

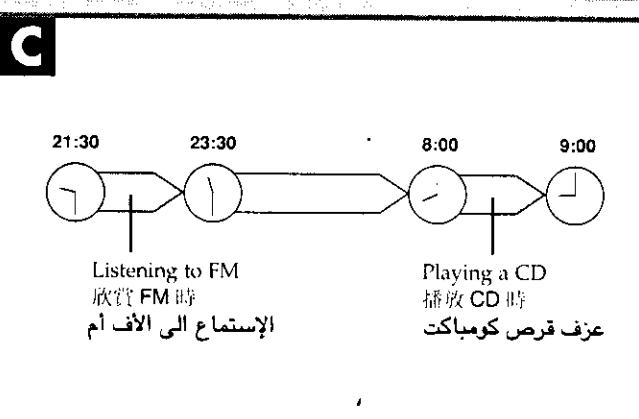
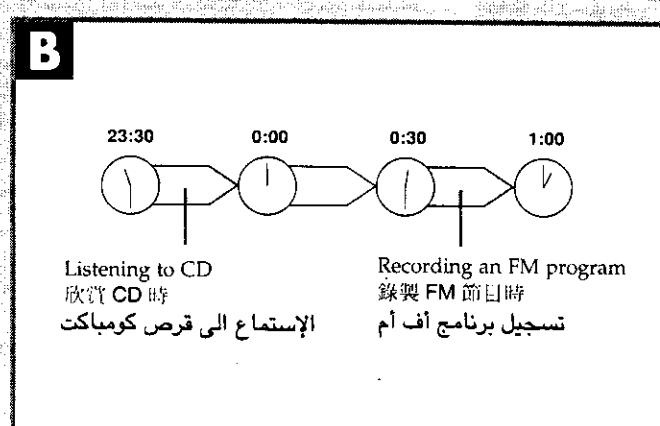
To change the time remaining during operation:

Press SLEEP to show the remaining time then press SLEEP to select the desired time.

Note

The sleep timer turns OFF automatically the moment you attempt to edit-record a CD using CD Manager function.

To use two timers together



The sleep timer always has priority.
Be sure not to overlap timer settings.

Record timer and sleep timer B

To go to sleep listening to a compact disc, and then to make a timer recording from a radio broadcast,

- ① Program the record timer.
Follow steps 1–6 on page 54.
- ② Switch on the power.
- ③ Start your CD and set the volume.
- ④ Set the sleep timer.

Be sure to set the sleep timer to off before the timer recording begins.

Play timer and sleep timer C

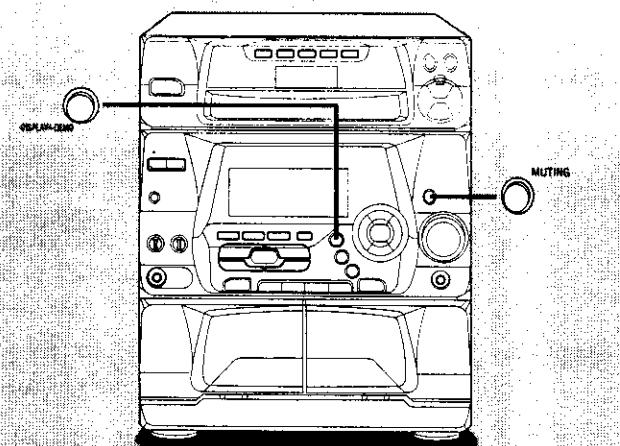
To go to sleep listening to an FM broadcast, and wake up the next morning listening to a compact disc,

- ① Program a CD for play timer.
Follow steps 1–6 on page 50 and 52.
- ② Switch on the power.
- ③ Tune in the station and set the volume.
- ④ Set the sleep timer.

For your reference

The play timer cannot be used in combination with the record timer.

Convenient functions



To mute the volume A

This feature is convenient when you have a telephone call, etc.

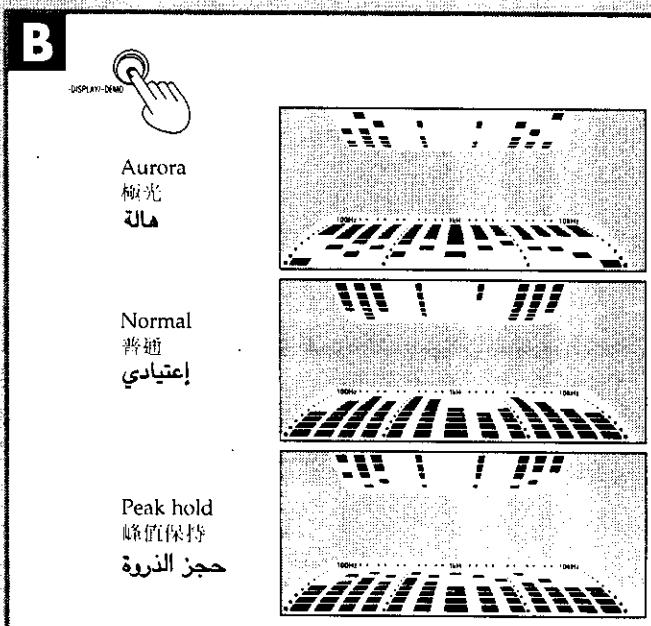
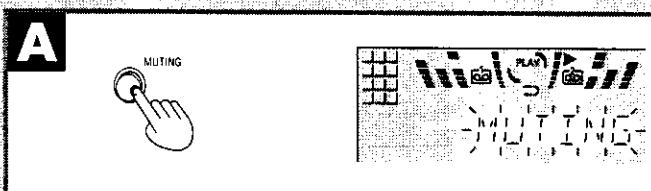
Press MUTING.

To cancel

Press MUTING once again.
"MUTING" goes out.

Muting can also be cancelled by lowering the volume all the way (--dB).

When the system is turned off, the muting operation will be automatically cancelled.



Switching displays B

Press -DISPLAY-DEMO.

Every time you press the button, the spectrum analyzer will change as shown on the left.

Using an external unit C

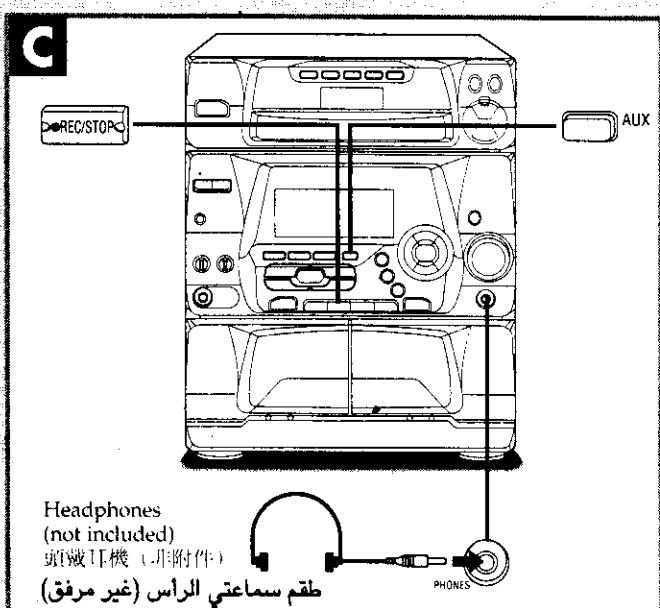
Listening to an external source

(See page 10 for external unit connection)

1. Press AUX.
The power will come on automatically.
2. Start playback from the external source. (For details, refer to the owner's manual of the equipment.)

Recording from an external source

1. Follow steps 1-3 on page 38.
2. Press AUX.
3. Press ● REC/STOP (recording starts).
4. Start playback from the external source. (For details, refer to the owner's manual of the equipment.)



Listening with headphones

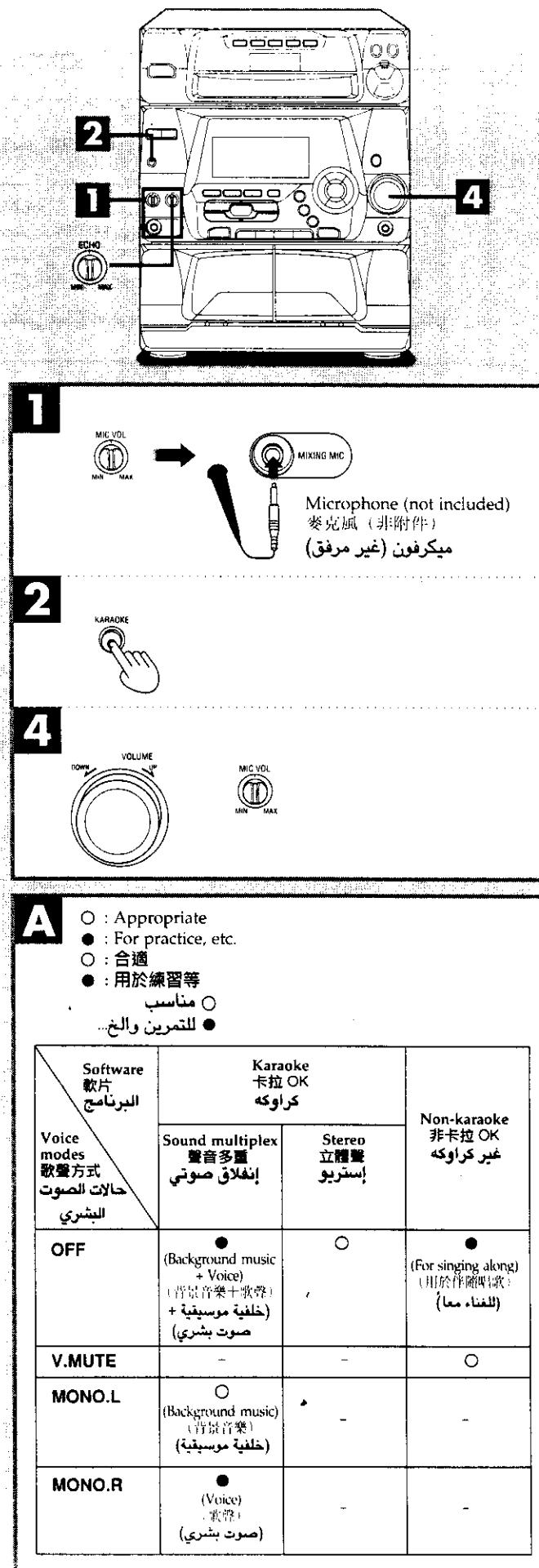
Reduce the volume level, and connect the headphones.
Plug type: 3.5 mm stereo

Note

Avoid listening for prolonged periods of time to prevent hearing damage.

Singing along with KARAOKE

This unit lets you enjoy the karaoke fun with audio CDs and audio tapes.

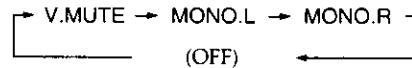


1 First, lower volume with MIC VOL, then, connect the microphone to MIXING MIC.

Plug type: 3.5 mm monaural

2 Press KARAOKE to select the voice mode.

Every time you press the button:



Voice mode selection:

If you want to play with the karaoke function, check first whether or not your software is formatted for karaoke and then select the voice mode. **A**

Note

A bar is indicated in the table when the voice mode is least effective. It is better to avoid using the mode in such cases.

V.MUTE function:

The voice portion of the track is blocked out but not the background music. You need software recorded in stereo sound if wanting to use the voice mute function. Voice and/or static may be reproduced with the following types of software.

- Software recorded monaural
- Classic music, or works performed by a limited number of instruments
- Chorus works or duets

3 Start the source (CD, etc.).

4 Adjust volume with VOLUME and MIC VOL and sing along.

To cancel the karaoke:

Press KARAOKE to select "(OFF)" mode.

To activate the echo effect:

Turn ECHO to adjust the level.

Notes

- If strange noise (squealing or howling) is emitted during use, move the microphone far away from the speakers, or turn down the microphone volume.
- When you are not using the microphone, disconnect it from MIXING MIC, and turn down the microphone volume level to MIN.
- Sound field cannot be used with karaoke nor can the radio.

To record your "KARAOKE" performance

1. Connect the microphone to the MIXING MIC jack.
2. Press Deck 2 ▲ OPEN, and then insert a tape. (Close the holder.)
3. Press KARAOKE to select a mode.
4. Start recording
When singing off CDs
Press CD and then ● REC/STOP.
When singing off tapes
Press TAPE DECK 1/2 and then TAPE EDIT.
5. Start "KARAOKE" performance.

Notes

- To playback the recorded tape, be sure to press KARAOKE to select the "(OFF)" mode.
- You cannot record sound field or bass effect with KARAOKE, or radio-backed KARAOKE.

Remote control buttons and functions

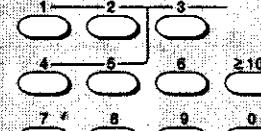
遙控器按鈕和功能

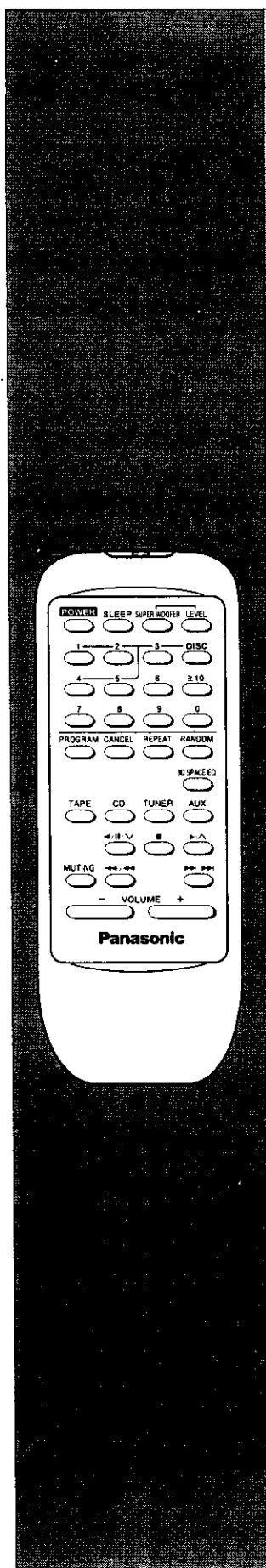
أزرار ووظائف مسيطر التحكم عن بعد

Reference pages given as black circled numbers.

深色襯底的數字表示參考頁碼。

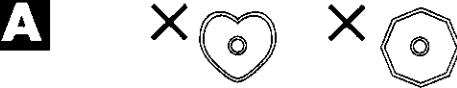
تبين صفحات المراجعة كأرقام داخل دوائر سوداء.

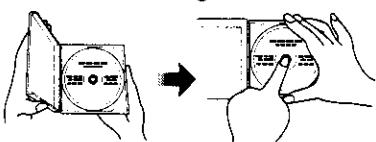
Button 按鈕 زر	Radio 收音機 ラジオ	CD CD قرص كومبات	Tape 磁帶 شريط	Other components 其它機件 أجهزة أخرى
		Turns the unit ON/OFF. 打開或關閉本機。 يُوصل/يقطع القوة للجهاز		-
		For setting sleep timer 58 用於設定睡眠定時器。59 لضبط موقعة الهجوع		-
	For preset station selection 18 用於預約電台選擇 19 لانتخاب محطة محددة مسبقاً 19	Playback (▶) 22 放音 (▶) 23 23(▶) الإعادة الصوتية (▶)	Playback (◀, ▶) 32 放音 (◀, ▶) 33 33(◀, ▶) الإعادة الصوتية (▶)	-
		Pause (II) 22 暫停 (II) 23 23(II) التريث		-
		Stop 22, 32 停止 23, 33 33, 23 التوقف		-
		• Searching forward / backward 22 • Skipping forward / backward 22 • 向前 / 向後檢索 23 • 向前 / 向後跳越 23 • البحث نحو الأمام / • الخلف 23 • التخطي نحو الأمام / • الخلف 23	• Fast-forward/Rewind (While stopped) 39 • Finding the beginning of a tune 34 • 快進 / 倒帶 (在停止中) 35 • 寻找樂曲開頭 35 • التقديم السريع / • الترجيع السريع (خلال التوقف) 35 • العثور على بداية اللحن 35	-
	For preset station selection 18 用於預約電台選擇 19 لانتخاب محطة محددة مسبقاً 19	• CD selection (1~5) • Track selection 23, 26, 30 • CD 選擇 (1~5) • 曲目選擇 26, 27, 31 • انتخاب قرص (١~٥) • كومبات (١~٥) • انتخاب المسار 31, 27, 29		-
		CD select mode 23, 26, 30 CD 選擇方式 26, 27, 31 حالة انتخاب قرص 31, 27, 29 كومبات 31, 27, 29		-

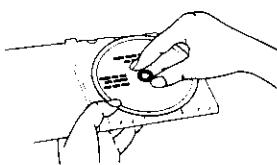


Button 按鈕 نر	Radio 收音機 راديو	CD CD قرص كومبات	Tape 磁帶 شريط	Other components 其它機件 أجزاء أخرى
PROGRAM	-	Engages program input. 26 進行編排輸入 27 يحرض دخول البرنامج 27	-	-
CANCEL	-	Cancels program contents. 26 取消編排內容 27 يلغي محتويات البرنامج 27	-	-
REPEAT	-	For selecting repeat playback mode. 24 用於選擇重複放音方式 25 لانتخاب حالة الإعادة 25 الصوتية المكررة 25	-	-
RANDOM	-	Random playback. 29 任意放音 29 إعادة صوتية عشوائية 29	-	-
	TAPE CD TUNER AUX	<p>Input source selection 18, 22, 32, 60 • When power OFF One-touch playback begins by pressing TUNER, CD or TAPE. • When power ON Band can be switched with TUNER, and tape deck switched with TAPE.</p> <p>輸入聲源選擇 19, 23, 33, 61 • 當電源關閉時 按 TUNER、CD 或 TAPE 鈕，可開始單觸放音。 • 當電源打開時 用 TUNER 鈕，可切換波段，或用 TAPE 鈕切換磁帶卡座。</p> <p>61, 33, 23, 19 • 當切換音場時 按 TUNER、CD 或 TAPE 鈕，可開始單觸放音。 • 當切換音場時 用 TUNER 鈕，可切換波段，或用 TAPE 鈕切換磁帶卡座。</p>		
3D SPACE EQ		Sound quality / field ON/OFF and selection 48 啟動 / 關閉和選擇音質 / 音場 49 49 • 选择音場 选择音場 / 调整音质 / 选择音质 / 选择音场		
SUPER WOOFER LEVEL		For setting super woofer level. 48 用於設定超低音揚聲器的電平。49 49 • 调整超低音电平 调整超低音电平 / 调整超低音电平 / 调整超低音电平		
MUTING		Mutes volume temporarily. 60 暫時靜止聲音。61 61 • 临时静音 临时静音 / 临时静音 / 临时静音		
- VOLUME +		For setting volume 18, 22, 32 用於設定音量。19, 23, 33 33, 23, 19 • 调整音量 调整音量 / 调整音量 / 调整音量		

Concerning compact discs

A 

B How to remove CDs
CD 的取出方法
كيفية رفع قرص كومبات

 Press on center piece and lift from both sides.
 按中心，卡道並抓住兩邊，再拿出。
 إلكس في المركز وارفع
 من الجانبين

C How to return CDs to their case
将 CD 放回盒中的方法
كيفية إرجاع أقراص كومبات إلى علبها

 Face label upwards and press downward from above.
 將標誌面朝上，並下按。
 ضع جهة الالصقة نحو الأعلى
 وابكس نحو الأسفل من الأعلى.

D How to hold CDs
CD 的拿放方法
كيفية مسك أقراص كومبات

 Do not touch the recorded surface.
 勿觸摸錄音表面。
 لا تلمس السطح المسجل
 عليه.

E How to clean CDs
CD 的清潔方法
كيفية تنظيف أقراص كومبات

 Wipe from inside outward.
 從內向外擦拭。
 إمسح من الداخل الى
 الخارج.

F How to take up tape slack
擰緊鬆馳磁帶的方法
كيفية التخلص من الإرطاخ

G To protect tapes against further recording
防止磁帶再次錄音時
منع تسجيلات أخرى على الشريط

 Side A
 A 面
 جانب A
 Tab for side B
 B 面用卡
 لسان جانب B
 Tab for side A
 A 面用卡
 لسان جانب A
 To re-record
 重新錄音時
 لإعادة التسجيل
 Normal position tape
 普通磁帶
 شريط موقع إعتيادي
 Hi-position tape
 高級磁帶
 شريط موقع عالي
 Detection hole
 檢測孔
 ثقب التمييز

With this player, you can only play compact discs having this mark.



However, do not use irregular shape CDs (heart-shape, octagonal, etc.). CDs of the sort can damage the unit. **A**

Handling precautions

Handle CDs as shown on the left (**B** ~ **E**).

- If you are taking the disc from a cold to a warm environment, moisture may form on the disc. Wipe this off with a soft, dry, lint-free cloth before using the disc.
- Do not write on the label side with a ball-point pen or other writing instrument.
- Do not use record cleaning sprays, benzine, thinner, static electricity prevention liquids or any other solvent.
- Do not attach labels or stickers to CDs. (Do not use CDs with exposed adhesive from tape or left over peeled off stickers.)
- Do not use scratch-proof protectors or covers other than those specified for use with this system.

Storage precautions

Be sure to store discs in their cases to protect them from dust, scratches, and warping.

Do not place or store discs in the following places

- Locations exposed to direct sunlight
- Humid or dusty locations
- Locations directly exposed to a heat vent or heating appliance
- In the glove compartment or on the rear deck of an automobile

Concerning cassette tapes

Selection of cassette tapes

Tapes can get caught on the capstans. Use caution with the following types of tapes.

Cassette tapes exceeding 100 minutes

Tapes are made of a thin film material. Do not repeatedly advance and stop the tape, fast-forward it or rewind it.

Endless-tapes

For this unit, it is recommended to use the tape which is appropriate to the auto reverse mechanism.

Always read the instructions provided with your tapes.

Tape slack

Tape slack may cause the tape to break.
 Use a pencil or similar object to take up the slack.

Erasure prevention

Use a screwdriver or similar object to break out the tab.

To re-record on a protected cassette

Cover the hole with adhesive tape
 Do not cover the detection hole on hi-position tapes

Storage precautions

Do not place or store tapes in the following places;

- In high temperature (35°C or higher) or high humidity (80% or higher) areas
- In a strong magnetic field (near a speaker, on top of a TV, etc.) This can erase a recording.
- Locations exposed to direct sunlight

Troubleshooting guide

Before requesting service for this unit, check the chart below for a possible cause of the problem you are experiencing. Some simple checks or a minor adjustment on your part may eliminate the problem and restore proper operation.

If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem, refer to the directory of Authorized Service Centers (enclosed with this unit) to locate a convenient service center, or consult your dealer for instructions.

Problem	Probable cause(s)	Suggested remedy	Reference page(s)
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Problems common to all systems

There is no sound when the power is ON.	Volume is set too low.	Adjust the volume level with the volume control.	18, 22, 32
The location of the various musical instruments is not well defined.	The (+) and (-) connections to one of the speakers are reversed.	Connect the speaker cords correctly.	8
The left and right sounds are reversed.	The left and right connections to the speaker are reversed.	Connect the speaker cords correctly.	8
When listening to the external unit, the left and right sounds are reversed.	The left and right connections to the external unit are reversed.	Connect the external unit's cord correctly.	10
Only one speaker is emitting sound.	One of the wires of the speaker cord is disconnected.	Connect the speaker cord correctly.	8
There is no sound when a source is being played.	The (+) and (-) wire of the speaker cords are shorted.	Switch the system to the standby mode, and reconnect the speaker cords so that they are not shorted. Then switch on the power.	8
"ERROR" message appears on the display.	Wrong operation has been done.	Operate the unit correctly by following the operating instructions.	
-- : -- appears on the display	<ul style="list-style-type: none"> You plugged the power cord in for the first time. There was a power failure recently. 	Set the time.	14

While listening to FM broadcasts

There is a "rushing noise" during a stereo broadcast which is not audible during a monaural broadcast.	The transmitting station is a long distance.	If you are using an indoor antenna, change to an outdoor antenna.	10
You hear excessive noise during a stereo broadcast, and occasionally the sound disappears.	The installation location and orientation of the antenna are unsuitable.		
The stereo indicator ("STEREO") flickers and does not light completely.	<p>The transmitting station is a long distance.</p> <p>The power of the TV set or VCR is ON.</p>	Try switching off the TV set or VCR.	
The sound during a stereo broadcast is highly distorted.	There is a building or mountain nearby. [Distortion is caused by interference between the signal from the transmitting station (direct wave) and the signal reflected from the building or mountain (reflected wave).]	Use a high-grade outdoor antenna, and install it in a good location, height, and orientation for reception.	10

While listening to AM broadcasts

You hear an unusual beat sound.	You are using the system at the same time you are playing a TV set.	Switch off the TV set, or use the system further away from it.	
You hear a low-frequency hum.	The antenna wire is near the power cord.	Separate the antenna wire from the power cord.	

Problem	Probable cause(s)	Suggested remedy	Reference page(s)
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When there is a television set nearby

The picture on the TV disappears or stripes appear on the screen.	The location and orientation of the antenna are incorrect.	If you are using an indoor antenna, change to an outdoor antenna.	10
	The wiring at the back of the system is unsuitable	Separate the antenna wire of the TV set from the system.	

When listening to tapes

Sound is low, intermittent, poor quality, noisy, scratchy, or unsteady.	Heads are dirty.	Clean the heads.	69
	Dolby-NR is wrongly set.	Match Dolby-NR ON/OFF according to the type of recording you made.	32
The deck does not enter the recording mode.	The erase-prevention tabs are removed from the cassette.	Attach tape to cover the space left by removal of the erase-prevention tabs.	66

While listening to compact discs

The display does not show the correct indication. Disc play does not start when you press the play button.	The disc label is upside down.	Set the disc with the label facing upward.	20
	The disc is dirty.	Wipe the disc with a soft cloth.	66
	The disc is scratched.	Replace the disc with a new one.	
	The disc is badly warped.		
	The disc is a nonstandard one.	Replace the disc with a different one.	66
	There is condensation inside the CD changer.	Wait for 60 minutes before using the CD player.	
A certain music passage can't be played correctly.	The disc is dirty.	Wipe the disc with a soft cloth.	66

While using the remote control

The system cannot be operated with the remote control.	The batteries are installed in the reverse polarity.	Re-insert the batteries in the correct polarity.	6
	The batteries are run-down.	Replace the batteries with new batteries.	6

Maintenance

If the surfaces are dirty

To clean this unit, wipe with a soft, dry cloth.

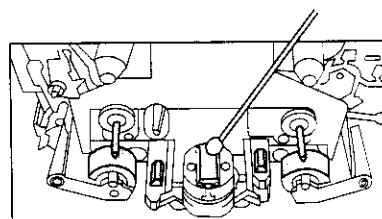
If the surfaces are extremely dirty, use a soft cloth dipped in a soap-and-water solution or a weak detergent solution.

- Never use alcohol, paint thinner, benzine, or chemically treated cloths to clean this unit.
- Before using chemically impregnated cloth, read the instructions that came with the cloth carefully.

For a cleaner crisper sound

We recommend that you periodically clean parts (the shaded portion in the figure below) the tape contacts like the heads.

Do not use any solution other than alcohol for head cleaning.



Technical specifications

AMPLIFIER SECTION

RMS power output
THD 10%, both channels driven

LOW	92 W per channel (6 Ω)
HIGH	38 W per channel (6 Ω)

Total BI-AMP power

130 W per channel

PMPO

2000 W (6 Ω)

Total harmonic distortion

Half power at 1 kHz

LOW 0.03 % (6 Ω)

HIGH

HIGH 0.15 % (6 Ω)

Input sensitivity and impedance

AUX	250 mV, 57 kΩ
MIC	0.6 mV, 680 Ω

Tone controls

6 EQ SPACE HEAVY, CLEAR, SOFT, HALL, LIVE, DISCO

Load impedance

6 Ω

FM TUNER SECTION

Frequency range 87.50–108.00 MHz (50 kHz steps)

Sensitivity 23.3 dBf (4.0 μV, IHF '58)

Total harmonic distortion

MONO	0.3 %
STEREO	0.5 %

S/N

MONO 60 dB

Image rejection at 98 MHz

35 dB

Stereo separation at 1 kHz

35 dB

Antenna terminal(s)

75 Ω (unbalanced)

AM TUNER SECTION

Frequency range 531 – 1602 kHz (9 kHz steps)
530 – 1600 kHz (10 kHz steps)

Sensitivity (for 500 mW)
(at 999 kHz) 250 μV/m

CASSETTE DECK SECTION

Track system 4 track, 2 channel

Heads

Record/playback Solid permalloy head (Rotary head)
Erasure Double gap ferrite head

Motor DC servo motor

Recording system AC bias 100 kHz

Erasing system AC erase 100 kHz

Tape speed 4.8 cm/s

Frequency response
[(+3 dB, -6 dB) at deck out]

NORMAL 35 Hz ~ 14 kHz
HIGH 35 Hz ~ 14 kHz

S/N (HIGH)

Dolby NR off 50 dB (A weighted)
Dolby NR on 60 dB (CCIR)

0.18 % (WRMS)

Wow and flutter

Approx. 120 seconds
with C-60 cassette tape

Fast forward and rewind time

S/N

CD UNIT OUT 95 dB (JIS.A)

Wow and flutter

Below measurable limit

Digital filter

8 fs

D/A converter

MASH (1 bit DAC)

SPEAKER SECTION

Type 4 way speaker system

Speaker(s) 17 cm cone type
Super Woofer 12 cm cone type

Woofers 6 cm cone type
Midrange 6 cm cone type

Tweeter HIGH (6Ω), LOW (6Ω)

Impedance HIGH 80 W (MUSIC), 40 W (DIN)

Input power LOW 200 W (MUSIC), 100 W (DIN)

Output sound pressure level 87 dB/W (1.0 m)

Cross over frequency 120 Hz, 4 kHz, 8 kHz

Frequency range 38 Hz–22 kHz (–16 dB)

Dimensions (WxHxD) 45 Hz–20 kHz (–10 dB)

Weight 285 x 345 x 326 mm

6.2 kg

GENERAL

Power consumption 165 W

Power supply AC 110 V/127 V/220 V/230–240 V, 50/60 Hz

Dimensions (WxHxD) 270 x 345 x 314 mm

Weight 8.25 kg

Notes:

1. Specifications are subject to change without notice.
Weight and dimensions are approximate.
2. Total harmonic distortion is measured by the digital spectrum analyzer.

MASH is a trademark of NTT.

Before moving or shipping this system

Prepare the system as described below to prevent damage to the mechanism.

1. Remove all CDs.
2. Press CD.
3. Press ■ for 5 seconds.
The display will change from "WAIT" to "LOCKED" to "GOOD BYE" and finally "ZZZ". Then, the unit will be turned OFF automatically. (This will set the so-called "shipping mode".)
4. Unplug the stereo.

The shipping mode will turn OFF automatically when you turn the power ON the next time.